

THE EVOLUTION OF INDIAN INDUSTRIES

THE EVOLUTION OF INDIAN INDUSTRIES

BY

ROHINIMOHAN CHAUDHURI, M.A., Ph.D.
LECTURER, CALCUTTA UNIVERSITY



PUBLISHED BY
UNIVERSITY OF CALCUTTA
1989

PRINTED IN INDIA

**PRINTED AND PUBLISHED BY BHUPENDRALAL BANERJEE
AT THE CALCUTTA UNIVERSITY PRESS, SENATE HOUSE, CALCUTTA**

Reg. No. 917B—September, 1939—B

CONTENTS

	PAGE
Preface	vii
CHAPTER I	
Indian Industries and their Decline	
CHAPTER II	
Capitalistic Agriculture	36
CHAPTER III	
Experiments and Encouragements for the Production of Raw Materials 	67
CHAPTER IV	
Growth of Modern Industries : Mining and Metal- lurgy 	94
CHAPTER V	
Manufacturing Industries 	126
CHAPTER VI	
Industrial Labour 	165
CHAPTER VII	
Labour Legislation during 1881-1911 	195

CHAPTER VIII

	PAGE
Post-War Labour Legislation ...	232

CHAPTER IX

Roads and Railways ...	272
------------------------	-----

CHAPTER X

Fiscal Policy in the Nineteenth Century ...	318
---	-----

CHAPTER XI

The Rise of Protectionism ...	362
-------------------------------	-----

CHAPTER XII

The State and Industry ...	419
Index ...	453

PREFACE

The problem of industrial development in India has assumed an important phase since the last Great War. At no period in the economic history of India was the problem so much discussed as during and after the War. The War demonstrated the unsoundness of the country's industrial system more forcefully than previously. The gradual ruralisation of the country throughout the nineteenth century was viewed with alarm, but attempts to check it were characterised by hesitancy and growth of industries after the Western system was slow. The aptitude of the people was marked more by apathy and indifference than by earnestness and determined efforts. It is only in the current century that a distinct tendency has manifested towards rapid industrialisation. The lessons derived from the economic development of Western countries and Japan are inspiring the people of India to take their legitimate place among the industrially civilised countries of the world. In addition, there is the stronger and more imperative need for opening up new avenues of employment to the growing intelligentsia and the surplus agricultural population of the country. The loss of wealth consequent on the export of agricultural products and raw materials and the importation of manufactured goods is considerable, and it is realised that the lack of balance between agriculture and industry should be remedied.

The task of industrialisation in the modern world is not an easy one. The future development of industries in a country must take stock of the progress already made and the difficulties encountered. It is the object of the

following pages to present in an outline the ground lost and the progress made. The decline of Indian handicrafts is deplored, but it was inevitable as the contest between the hereditary crafts and the modern machine industries has everywhere been unequal. The scope for small-scale industries unaided by modern mechanical contrivances is limited, and in the competitive world mass production has become the rule. The introduction of the modern system of industries is to be attributed to British influence and contact, but the development has not been commensurate with the size and the resources of the country. The growth of large-scale industries in India has given rise to many social and economic problems. The lives of labourers have been profoundly influenced and the country has had to seek on the lines of legislation in other countries, remedies to check the evils of industrialism. The problems of housing and educating the labouring population have assumed an important phase. The future industrial edifice of India must be built on the solid foundation of a healthy and contented labour force and the formation of a permanent class of industrial operatives is a desideratum from the point of view of industrial efficiency.

The development of modern industries is vitally connected with fiscal policy. Even when comparative advantages exist, the task of building up a new industry is attended with serious difficulties at the initial stage specially when foreign competition is to be faced. It is a happy sign of the times that the Government of this country has yielded to the national demand for a policy of protection for the development of industries. But that policy is still marked by hesitancy, and the measure of assistance rendered to some of the industries is inadequate and half-hearted. It is admitted that mere tariffs cannot create industries in a country but adequate tariffs are often essential to inspire the confidence of the industrialists.

The uneven distribution of the mineral resources has in no small measure been responsible for the imperfect industrial development in some of the provinces. The problem of finding new sources of power requires to be solved. The direct and indirect efforts of the State for the promotion of industries have been inadequate. Industrial research has received very little attention in India and it is felt that as the future of industries will be based largely on the products of the country, their manufacturing possibilities require to be fully explored. The existing arrangements for this purpose have been quite inadequate. The policy of purchase of Stores for public requirements has been greatly modified in the direction of local purchase in recent years, but more ought to be done in this direction. Little has been done to enlist the co-operation of active business men and industrialists for removing difficulties in the way of industrial expansion and for planning a constructive programme of future development.

The problem of railway rates in India presents a complicated issue. It has hitherto been customary to look at this problem from the point of the accountant rather than that of the industrialist. With the increased control of the Legislature over railways it is hoped that attention will be paid to the development of industries by a judicious regulation of railway rates.

In the preparation of this work I have relied mainly on authoritative Government publications, correspondence and personal investigations. Finally, I must take this opportunity of expressing my deep indebtedness to Dr. Pramathanath Banerjea, M.A., D.Sc. (London), Minto Professor of Economics, Calcutta University and to Professor S. C. Ray, M.A., who have helped me all along by valuable suggestions and criticisms which I have always appreciated.

R. M. CHAUDHURI

CHAPTER I

INDIAN INDUSTRIES AND THEIR DECLINE

From time immemorial agriculture has been the primary industry of India. Endowed by nature with many favourable circumstances—a tropical climate, a fertile land and an abundance of rainfall, the bulk of the people have depended upon this industry for their subsistence. The sacred books of the Hindus extolled the virtues of agriculture as a means of livelihood and held in veneration cattle, the most important asset of an agricultural population. But, though agriculture was the predominant and traditional industry of the country, the arts and industries were not neglected or relegated altogether to the background. As a matter of fact, a bountiful nature exacting too little of the energy of the people for eking out their subsistence left them ample leisure for the pursuit of arts and industries. If the history of civilisation consists greatly in the history of the useful arts, the history of Indian civilisation dates long before the dawn of the Christian era.¹

The arts and industries developed mostly in cities or towns—the seats of the ruling chiefs or court life or centres of pilgrimage, but the true economic life of the people lay in the village where the agriculturists lived. Early villages in India were organised on communal lines with economic and political self-sufficiency. In village communities agriculture was the

¹ At a time when the West of Europe, the birthplace of the modern system, was inhabited by uncivilised tribes, India was famous for the wealth of her rulers and for the high artistic skill of her craftsmen.

—Report of the Indian Industrial Commission, p. 1.

primary industry and other industries ministered to the needs of the agriculturists. Each village had its smith and carpenter who manufactured and repaired the implements of agriculture and built the dwellings of the farmers, its weavers to supply clothing, its oil-presser oil, its potter earthen utensils, its tanner to supply shoes and its barber and washerman. The simple requirements of the villagers were met by the artisans of the village. There was little trade with outside regions and the village communities were self-contained and self-governing. Governments might change but the village communities remained intact uninfluenced by any extraneous influences.

It was in the nineteenth century that this solidarity of Indian economic life was broken by its contact with western civilisation. The placid contentment and stability of the by-gone days have been replaced by an economic restlessness which was unknown before. The tremendous development in the means of transportation and communication has broken up the old isolation, has linked the country to the wider markets of the world. The old local economy has been replaced by international or world economy. The growth of new industries, the movement of population from villages to industrial centres, the growth of inland trade and traffic, the application of mechanical powers to manufactures, and the exploitation of minerals are the characteristic features of modern economy.

It is the object of these pages to describe the changes which have taken place in the industrial life of the country since the beginning of the nineteenth century only without attempting to look too far into the past.

When the European traders in the seventeenth and eighteenth centuries extended their commercial connections with India, the industrial development of the country was at

Economic solidarity
broken.

Indian exports—
their nature.

any rate not inferior to that of the more advanced European nations. In their letter to Robert Dundas, the Court of Directors of the East India Company pointed out, "The articles of first necessity their own country furnishes more abundantly and more cheaply than it is possible for Europe to supply them. Except woollens, in a very limited degree for mantles in the cold season, and metals on a scale also very limited to be worked up by their own artisans for the few utensils they need, hardly any of our staple commodities find a vent among the Indians. The chief commodities suited to the European market, which India has hitherto been found to produce are spices, pepper, drugs, sugar, silk, saltpetre, indigo, raw cotton and above all cotton manufactures of singular beauty and endless variety. These last have formed from time immemorial the grand staple of India."¹ This statement indicates the course of trade between India and European countries in the eighteenth century. European countries had hardly any manufactured goods suited to the requirements of the Indian market but, on the other hand, India had some manufactures which she could export to European markets. Referring to the extension of British manufactures into the Indian market it was observed in the same letter: "The records of the Company, for two centuries, are filled with accounts of their endeavours to extend the sale of British products in India and of the little success which has attended them."

In the trade between Europe and India the former had to bring precious metals for the purchase of Indian commodities. During the six years from 1802-3 to 1807-08 the total amount of bullion imported into India was £12,831,099 by the East India Company and private

Bullion—the chief
import.

¹ Letter of the Court of Directors to the Right Hon'ble Robert Dundas, 13th January, 1809 (Papers relating to the East India Company's Charter, p. 6).

merchants.¹ The French, the Dutch and other European nations trading with India equally failed to introduce the manufactures of Europe. The Americans who entered into Indian commerce during the last quarter of the eighteenth century carried silver for the purchase of Indian goods.

Of the manufacturing industries existent in India in the beginning of the nineteenth century, the most important were the cotton textiles and silk. Baines remarked, "The birthplace of the cotton manufacture is India, where it probably flourished long before the date of authentic history."² As to the antiquity of this industry he says further, "The delicate fabrics of India, including Muslins and Calicoes, both plain and figured, were brought by Greek navigators to the parts of Egypt and Arabia whence they reached the capital of the Roman world, and some of the wealthy cities of Greece."³ It was the most widespread industry of the country. The tropical climate made this article suitable as a garment of the vast majority of the people. On the coast of Coromandel and in the province of Bengal, when at some distance from the high road or a principal town, it was difficult to find a village in which every man, woman or child was not employed in making a piece of cloth.⁴

When Dr. Francis Buchanan undertook his statistical survey during 1806-1814 in Bengal and Behar he noticed the widespread existence of cotton spinning and weaving industry in the country. In the district of Behar he estimated the value of yarn produced at Rs. 23,67,277.⁵ In the district of Shahabad 159,500 people were employed in spinning and the whole outturn was valued at Rs. 12,50,000.

¹ Papers relating to the East India Company's Charter, March 1812, p. 20.

² Baines, *History of Cotton Manufacture*, p. 2.

³ *Ibid*, p. 24.

⁴ Orme, *Historical Fragments of the Mogul Empire*, p. 413.

⁵ Montgomery Martin, *History of Eastern India*, Vol. I, p. 355.

The value of cloth produced was Rs. 16,34,000. There were similar calculations in regard to other districts which he visited.* About the District of Dinajpore (Maldah was a part of it) he wrote: "The preparation of cotton thread is a principal manufacture and occupies the leisure hours of all the women of higher ranks and of the greater part of the farmers' wives. Even the women of the Brahmins here employ themselves in this useful industry and in fact every woman is employed in it more or less except those belonging to trades in which both men and women are engaged such as weaving, pottery, etc. The farmers' wives are however the greatest spinners and are usually thus employed during the whole afternoon."¹

Not only was this industry widespread but there was specialisation for the production of different varieties. Bengal was celebrated for the production of the finest Muslins, the Coromandel Coast for the best Chintzes and Calicoes ; and Surat for strong and inferior goods of every kind. Table cloths of superior quality were made at Patna. The long cloths and fine pullicats were produced in the Presidency of Madras. The coarse piecegoods under the name of baftas, dhoties and pullicats were extensively manufactured in the district of which Surat was the port.

By far the most important of Bengal cotton manufactures from an artistic point of view, were the Dacca Muslins. Muslins of Dacca. The value of the Dacca Muslins consisted in their fineness, to attain which an incredible amount of patience, perseverance and skill were formerly displayed both by the spinners and the weavers. One way of testing their fineness was to pass a whole piece of Muslin, twenty yards long by one yard wide, through the small

¹ Montgomery Martin, *History of Eastern India*, Vol. II, p. 959.

² Baines, *History of Cotton Manufacture*, p. 76.

aperture of an ordinary-sized ring.¹ The ingenuity of the weavers of Bengal and their delicate manipulative skill elicited the admiration of Mr. Baines who remarked: "It cannot but seem astonishing, that in a department of industry where the raw material has been so grossly neglected, where the machinery is rude, and where there is little division of labour, the results should be fabrics of the most exquisite delicacy and beauty unrivalled by the products of any other nation, even those best skilled in mechanical arts."² In the same strain wrote Dr. Forbes Watson: "With all our machinery and wondrous appliances, we have hitherto been unable to produce a fabric which for fineness or utility can equal the 'woven air' of Dacca—the product of arrangements which appear rude and primitive, but which are in reality admirably adapted for their purpose."³

Cotton manufactures formed an important part of the investment of the Company. During
Exports of cotton manufactures.
 twenty-five years previous to 1797, the Company's exports of Bengal piecegoods were 16,129,635 pieces thus giving the average for each year at 643,993 pieces valued over a million. The average exportation of cotton piecegoods to England during 1797 to 1801 was 1,004,885 pieces valued over £1½ million.⁴

It will thus, appear from the above figures that the country even after meeting her requirements could export considerable quantities of cotton manufactures for sale to European markets. As to the potentiality of the increase in the export trade of the country Mr. Brown remarked, "It is not very easy even to imagine to what extent the export trade of the rich and fertile country might be

¹ T. N. Mukherji, *Arts and Manufactures of India*, p. 195.

² Baines, *History of Cotton Manufacture*, p. 74.

³ Quoted by T. N. Mukherjee in his *Arts and Manufactures of India*, p. 197.

⁴ Appendix No. 47, Supplement to the Fourth Report of the Affairs of the East India Company, 1806-10.

ultimately brought, should the cultivation of cotton for the China trade, the manufactures of Bengal and export trade to Europe,*be encouraged in Behar and Benares districts and the higher parts of Bengal.”¹

The next important industry was silk. It was not so widespread as the cotton industry for it
 Silk industry. was more or less an article of luxury.

There seems to be no doubt that the industry took root in the country long ago. Bernier, the celebrated traveller of the 17th century, spoke in most glowing terms of the silk as of other industries of Bengal. “ Besides the sugar I have spoken of and which may be placed in the list of valuable commodities, there is in Bengal such a quantity of cotton and silk, that the kingdom may be called the common storehouse for those two commodities of merchandise not of Hindoosthan or the Empire of the Great Mogul only but of all the neighbouring kingdoms and even of Europe.”

Before the beginning of the 16th century the silks, brocades, and dyed cotton cloths of Ahmedabad, generally bearing the name of Cambay, the port of their shipment, were in demand in every eastern market from Cairo to Pekin.²

Silk industry had two important branches—the produc-
 Its localisation. tion of raw silk or sericulture and silk weaving. Sericulture was confined to

Bengal only but silk weaving was found in all the provinces. In the United Provinces of Agra and Oudh, Benares and Azamgarh are the two important silk weaving centres. The silk industry of Benares owed its origin and development to its being a centre of pilgrimage. The resort of so many pilgrims, some of them princes and wealthy nobles

¹ Brown, Report on the External Commerce of Bengal for 1799.

² Birdwood, Industrial Arts of India, p. 275.

from all parts of India, could not fail to stimulate commercial activity, and silk being considered pure by the Hindus the manufacture of silk cloth found a convenient centre there.¹ Agra as a royal city had a developed silk industry and the fabrics of this place had some reputation in Europe a hundred years ago. The silk industry of Azamgarh was in a flourishing condition due to royal patronage. In 1837 it was reported by Mr. Montgomery that there were manufactured in Azamgarh district 318,722 pieces of tasar.

In Bengal, the manufacture of silk was at one time an important industry in the Presidency, Burdwan and Rajshahi divisions. When Dr. Buchanan visited Dinajpore he found about 4,800 looms engaged in the manufacture of silk cloth, the outturn of which was valued at Rs. 9,60,000.² In respect to silk manufactures, Ahmedabad has long held a prominent place as a manufacturing city in India. Its kincobs and brocades though not so quite rich as those of Benares, were much sought after in consequence of their durability and non-fading qualities of their gold tissues. Its mushrus were supposed to have been the best in India and even the ordinary silk cloths were in good demand.³ The East India Company developed the silk weaving industry by establishing three weaving factories at Cossimbazar in Bengal and goods were manufactured in these factories from the country reeled or putney silk. In the time of the East India Company choppas, bandannas were printed at Cossimbazar of various colours and choice patterns, supplied by the Company's agent and were in those days favourite articles with the English and the foreigners who used these as handkerchiefs and neck-cloths. Their exports

¹ A Monograph on Silk Fabrics produced in the North-Western Provinces and Oudh, p. 102.

² Martin, History of Eastern India, Vol. II, p. 971.

³ Geoghegan, Some Account of Silk in India, p. 45.

were heavy and would find a ready market.¹ But the East India Company were more interested in raw silk. Their trade in Indian silk was, however, inconsiderable till about the middle of the 18th century. The regular export of raw silk from Bengal may be said to have commenced in the year 1772. The annual average export for the 20 years from 1773 to 1792 was about 409,000 lbs. From the following table it will be evident how the export of raw silk from India increased in subsequent periods.

1801	...	358,825 lbs.	1840	...	1,108,465 lbs.
1811	...	414,404 ,,	1851	...	1,511,506 ,,
(Average of 4 years).					
1822	...	874,228 ,,	1861	...	1,485,276 lbs.
1830	...	1,736,231 ,,	1870	...	1,558,246 ,,

During the first quarter of the nineteenth century, Bengal silk became very popular in the English market. From the point of view of quality it could easily bear comparison with any other silk. Mr. Durant a silk broker in his evidence before the Lords Committee of 1830 remarked that the best qualities of Bengal silk were sold in England at a price nearly as high as the best qualities of Italian silk.² The same fact was corroborated by Simons in his evidence before the Commons Committee of 1832 when he said, "Italian silk is good, French silk is good and Indian silk is also good, each in its way; and Bengal silk is as much required as any other kind."

The industries of dyeing and calico-printing deserve mention in connection with cotton and silk industry. From time immemorial, India has practised the art of dyeing. On

¹ Kissen Mohan Mullick, Report on the External Commerce of Bengal.

² Report of the Select Committee on Indian Affairs, 1832, Vol. IV, p. 490.

the practical side of the art of dyeing there is evidence to show that several colours originated in India during the Mohammedan historic period. The art as a whole seems to have been cultivated with greater energy in Gwalior than in any other place in the north-west of India and the practical skill of the dyers of Gwalior is recognised unreservedly throughout the country up to this day.¹

Jaypur in Rajputana has long enjoyed a special reputation as the seat of an advanced dyeing industry.

Jaipur—an important seat.

The manufacture of fine woollen fabrics in Kashmere and the Punjab gave rise to the study and general development of the tinctorial art in the extreme west of Upper India. In Bombay dyeing and calico-printing as practised in India were, as a rule, hereditary occupations in which the processes followed were handed down from father to son.² At Shahada in Khandesh which is a centre of the dyeing industry there were at one time 350 dyers. At Hubli in the Dharwar district it was reported that Rangirs used to dye rough cloth for jajams (light carpets) and razias (bed quilts).³ In Madras the weavers of Madura used vegetable dyes of local manufacture.⁴ In Bengal in the district of Dinajpore Dr. Buchanan found that the cotton and silk threads were dyed before they were woven, with safflower and rose bud called Kusum and Golabi. Silk was also dyed of a fixed red colour called Monjista.⁵

¹ S. M. Hadi, A Monograph on Dyes and Dyeing in the North-Western Provinces and Oudh.

² Fawcett, A Monograph on Dyes and Dyeing in the Bombay Presidency, p. 1.

³ *Ibid*, p. 7.

⁴ Holder, Monograph on Dyes and Dyeing in Madras.

⁵ Martin, History of Eastern India, Vol. II, p. 971.

The industry of calico-printing generally known by the name of *kapre ki chippāi* had been in existence throughout Northern and Western India. Printed calicoes formed an important item in East India Company's exports but their importation into England was prohibited by the Act of 1700 as they competed with the woollen and silk industries of the country. In all probability the art originated in the ancient city of Kanauj whence it spread to neighbouring provinces. The beautiful curtains and table cloths manufactured at Jehangirabad met with public appreciation not only in India but in England and other foreign countries where they were exhibited. In all centres of pilgrimage printed cloths were largely purchased by the pilgrims for presentation to their relatives. India was well supplied with all the varieties of dye stuffs such as indigo, safflower, turmeric, al, manjith, myrobalan, lac and cochineal from which different kinds of dyes were manufactured. These materials yielded different varieties of dyes that were superior to the mineral dyes in respect of durability and artistic beauty. Mr. Holder condemned both colour and design of many of the imported colour-printed fabrics which offended the eye when brought in contact with the more subdued colouring of the woven cloths made by native weavers with country dyed yarn.¹

Woollen industry was not so extensive as the cotton or silk industry. The tropical climate of the country did not favour the use of woollen garments. It was in the Punjab and Kashmere that this industry was localised where the intense cold of the locality caused a large demand for woollen clothing. In the Punjab, the shawl industry developed at Amritsar, Ludhiana, Lahore, and Jalalpore. The industry owed its initiation to the

¹ Holder, *Dyes and Dyeing in Madras Presidency*, p. 7.

migration of Kashmiri weavers who settled down in all these places. An export trade developed in woollen shawls to the

French market where it was a fashion among the ladies to wear Indian shawls

Popularity of Kashmir shawls.

and this trade continued up to the third quarter of the nineteenth century. The manufacture of coarse blankets suited to the requirements of the agriculturists was more widespread. The climate of the plains is unfavourable for the production of sheep wool of a superior quality suitable for the manufacture of fine fabrics.¹ The woollen industry of the Punjab worked up, in 1884-85, 82,400 maunds of sheep wool.²

Saltpetre was an industry in which the East India Company interested itself before the 19th century. It was obtained from various parts of India, such as the Coromandel Coast, Guzrat, Agra, and the Konkan ports. In the beginning of the nineteenth century, Bihar became an important source of supply of this article. For political reasons its export was prohibited to foreigners and was exported exclusively in the ships of the Company.³ The figures below will show the steady increase in the export of saltpetre from India :—

1801	...	...	82,757 cwts.
1811	...	...	104,454 „
1822	...	...	133,166 „
1830	...	...	143,702 „
1840	...	...	183,603 „

In the 17th century an irregular trade with England in refined sugar and candy was maintained by the factors at Surat. The quantity of

Sugar industry:

¹ T. N. Mukherji, *Arts and Manufactures of India*, p. 215.

² Monograph on the Woollen Manufactures of the Punjab, p. 1.

³ Regulation V, of Bombay, 1816 prevented the export of saltpetre on any but the British ships.

Bengal sugar exported by the Dutch to Batavia amounted to 500,000 lbs. about the middle of the 17th century.¹

Conditions in the world's sugar trade have changed greatly in modern times. In the beginning of the 19th century, India exported sugar to Great Britain. In a letter to the Governor-General, the Court of Directors observed, "It is our continued wish and endeavour to render this article an Indian staple, and a valuable resource for this country in time of emergency but it cannot be denied that besides the general disadvantage of high freight, this bulky commodity may be exposed on the return of peace with Russia, to great discouragements."² But the extension of trade in sugar was interrupted by another consideration,

Interests of colonial
sugar.

viz., the interests of the West Indian Colonies. Thus, we find in another letter the following: "Sugar has been of late

imported from our territories, but the necessary expense of conveyance from so great a distance prevents it from being profitable and it can be much encouraged only at the expense of our West Indian colonies." The East India Company had a factory at Benares which employed agents to go about the country to buy sugar from petty manufacturers.³

"The Benares Province," said Sir Charles Trevelyan, "is our Jamiaca; it is the great sugar district of India. In 1789 when the Commercial Resident was sent to Benares he reported that only 3,000 maunds were then grown in the Ghazee pore district, but in 1832, 261,133 maunds paid duty on exportation."⁴

¹ Moreland, *From Akbar to Aurangzeb*, pp. 138-39.

² Letter from the Court of Directors to the Governor-General in Council, 20th June 1810.

³ Letter of the East India Company to the Hon'ble Robert Dundas, dated the 13th January, 1809.

⁴ Evidence of Sir C. Trevelyan before the Lords Committee on a petition of the East India Merchants, 1840.

The differential duty in favour of the colonial sugar was an obstacle to the expansion of the Indian sugar trade. In 1836 the rates of duty on colonial and Indian sugar were equalised and for the next three years the export from India increased but thereafter it began to decline. There was a deeper reason than the levy of a duty which brought about the decline of the industry as will be seen later.

The export of sugar from India may be seen from the following figures¹ :—

1801	...	...	54,347 cwts.
1811	...	...	20,405 ..
1822	...	...	226,475 ..
1830	...	...	770,097 ..
1840	...	...	498,730* ..

In addition to the staple industries mentioned above there was in the country an extensive variety of artistic industries. The artistic industries flourished mostly in towns—the seats of ruling chiefs or centres of pilgrimage. They depended in a great measure upon the patronage of the aristocracy of the country. The ingenuity and workmanship displayed by the Indian artisans elicited the admiration of foreigners when the works of art were sent to foreign exhibitions.

Among the Indian artistic industries mention may be made of a few important ones.

The manufacture of pile carpets was introduced into India by the Muhammadans. Persia was the original home of Eastern carpets. Indian carpet though inferior to Persian carpet was largely patronised by the aristocracy of the country. Agra, Amritsar and Mirzapore are the chief centres of the industry.

¹ Macgregor, Report of British Trade with India, pp. 183-84.

Embroidery was an important artistic industry of the country. It is either worked in loom or wrought by needle-work. On cotton fabrics the patterns are made of cotton, silk, gold or silver wire twisted with silk thread called Kalabatun. Dacca and Lucknow are the important centres of embroidery work. The Jamdani Muslins of Dacca were in general use in the nineteenth century. The Kashida was a favourite cloth among the Arabs, the Persians and the Turks.¹ In Benares silk fabrics are embroidered with gold or silver thread. Some of the best gold embroidery is done on a velvet ground or on English broad cloth. Elephant jhuls, horse-trappings, palki-covers, caps and slippers were embroidered with gold or silver thread. Ivory carving was another artistic industry. Carved objects in ivory were worked in some places—the most important being those made at Murshidabad and in Travancore. The Murshidabad manufactures were perhaps the best in India “fully displaying in them, the finish, minuteness and ingenuity characteristic of the Indian art.” Pictorial ivory cards, toys, figures, images of gods, combs, fans and bangles were manufactured from ivory.

The mosaic work of the Tajmahal is employed in the decoration of plates, cups, boxes and other small objects. The art consists in inlaying on white marble ground coloured stones. The marble work of Agra is so much esteemed by the tourists that the vitality of the industry depends largely on their demand.

Sandalwood carving was an important artistic industry of the Presidencies of Bombay and Madras. Beautiful figures were carved on wood for display on windows or door-leaves.

The chief product of Bombay was its ships. Ship-building in Bombay dates from 1735 when Lavji Nasarvanje, the Parsi foreman of the Company's ship-building yard at Surat

Ship-building in-
dustry.

¹ T. N. Mookerjee. *Arts and Manufactures of India*. p. 240.

was induced to come to Bombay.¹ There were six firms of builders who had an absolute monopoly of the docks.² In the first decade of the 19th century many merchant ships of from 600 to 1,300 tons were built for the country trade and for the service of the East India Company. In beauty of construction, workmanship and durability they were not inferior to any class of merchant ships in the world.

Construction of ships
in Bombay and
Calcutta.

Bombay was the first place outside Europe where a ship of the line was built. According to Low, the largest ship ever built in Bombay was the *Ganges* a frigate pierced to carry 92 guns and of 2,289 tons. Of other men-of-war there were launched one of 74 guns, two of 38 guns, two of 36, two of 18 and two of 10 guns. For commercial purposes there were built up to about 1816, nine ships of about 1,000 tons, five of 800, six of 700, five of about 600 tons and 35 smaller vessels.³ For the skill of its naval architects, the superiority of its timber and the excellence of its dock, Bombay was considered of great importance in the British Empire in India.⁴ In Bengal, Calcutta became the centre of ship-building industry. In 1801, 19 ships of 10,079 tons in the aggregate and in 1813, 21 ships of 10,376 tons were built in Calcutta. Between 1781 and 1821 the number of ships built in Calcutta was two hundred and thirty-five. The construction of ships was not confined to Calcutta alone. At Fort Gloster between 1811 and 1828 twenty-seven vessels measuring 9,332 tons were built and as early as 1808 a vessel of 1,450 tons, the *Countess of Sutherland* was built at Titagur near Barrackpore. "So great had been the improvement since

¹ Low, *Indian Navy*, I, 173 (quoted in *Bombay Gazetteer*, Vol. XIII, p. 517).

² Hamilton, *Hindustan*, Vol. II, pp. 155-56.

³ Hamilton, *Hindustan*, p. 156.

⁴ *Bombay Gazetteer*, Vol. XIII, pp. 517-18.

that period that Bengal ships built of teak and saul were preferred to any other for durability and wear." ¹

In addition to the activities of the Company in ship-building there were many ships built in India mainly for the coastal trade. In lower Bengal the inland traffic was carried mostly in boats during the rainy season. This necessitated an extensive boat-building industry in the interior districts. About the district of Gorakhpur Dr. Francis Buchanan wrote, "Many are employed by timber merchants in squaring logs and a good many are employed in building boats. Boats of 1,000 maunds burden were constructed costing Rs. 700 each. Annually according to demand there are built from 200 to 400 boats." It should be observed here that the ships in that period were built of wood and in Bombay there was a regular supply of timber from Calicut.

I have briefly outlined the various industries which were extant in India in the beginning of the nineteenth century. We have no statistics to show the proportion of people engaged in manufacturing industries in the first half of the nineteenth century. But there seems to be no doubt that these diverse industries gave employment to a larger proportion of the population than it is at the present time.

The most important feature of the organisation of Indian industries was that they were carried on in the cottages of the workers. The master manufacturer was the central figure in each concern. He was assisted by the members of his family and occasionally by hired labourers on wages. There was little division of labour as the master manufacturer had to play the rôle of a worker, a capitalist and a dealer. Thus, the country had the same industrial organisation as was prevalent in England just before the Industrial Revolution. There were certain industries such as cotton and silk in

¹ Good Old Days of the Honourable John Company, p. 116.

which there was a partial division of functions. This corresponded to a certain extent to the domestic system of England under which materials were advanced by the dealers and finished goods were purchased by them, the workers receiving only piece wages. In cotton weaving industry the system was by no means uniform. The weavers received yarn from their customers and supplied cloth, receiving a remuneration for their work. There was also production for the market, in which case the weavers bought their yarn mostly on credit from the dealers and sold the product in the weekly market. In the artistic industries, production was carried on according to the orders of customers mainly with advances from them.

Industry was often combined with agriculture but to what extent it is difficult to say. In rural industries agriculture was partially combined with industries, *e.g.* the spinning industry was an occupation of the farmers and their wives as has been noticed previously.

The urban industries were more compact and closely organised than rural industries. Here the institution of caste served the same function as the guilds in mediaeval Europe.

Organisation of
urban industries.

Thus in the district of Bhagalpur Dr. Buchanan found that in towns, every trade had a chief called by various names such as Chaudhuri, Mistri, Dangriya, etc., who received petty fees from his associates, represented all grievances to the officers of the Government, regulated the prices of labour and commodities, settled petty disputes and supplied any large demands such as when persons of rank or bodies of troops passed.¹ In the silk-weaving industry of Lahore there existed a similar organisation half a century back. The industry within the city regulated its dealings with the customers in respect of wages and quality of products manu-

¹ Martin, *History of Eastern India*, Vol. II, p. 282.

factured. But this kind of organisation is fast disappearing and is giving place to a competitive system.

The East India Company were interested in various industries but the most important were, as
The system of the Company. was noticed before, cotton, silk, saltpetre, indigo, and sugar. They established

factories in important industrial centres for securing merchandise for their investment. These factories were not factories in the modern sense of the term but merely purchasing agencies with commercial residents in their charge. They followed the traditional system of making advances to the producers for the delivery of goods. The Company by virtue of their Charter had a monopoly of the trade of India and private traders were allowed to exist mainly at their sufferance. It is undoubtedly true that there was a great increase in industrial activities owing to the opening of broad and important markets for India's commodities, but this extension was attained by a policy of systematic exploitation amounting in many cases to gross oppression. As regards the extension of industrial activity we have the evidence of Mr. Brown who remarked that "Previous to the year 1798, a ship arriving in the Bengal river with funds to the extent of thirty thousand, and in want of bale goods, was compelled to remain until they could be manufactured at the different aurangs ; whereas at the present period there are seldom less than one million sterling in value of cloths belonging to the native merchants deposited in Calcutta for sale and of every other species of merchandise in equal proportion."¹ It was the combination of political power with commercial activities that was the source of all troubles. Before 1811, the Company's investment of piece goods was
Policy of compulsion and the resulting oppression. provided under a most rigorous and oppressive system of coercion ; the weavers were

¹ Extract from Mr. Brown's Report on the Commerce of British India in 1802-03.

compelled to enter into engagements and to work for the Company contrary to their own interests.¹ Regarding the proceedings of the Company in Western India we have the evidence of Mr. Rickards that the Surat investment was provided under the "most rigorous and oppressive system of coercion," that the weavers were compelled to enter into engagements and to work for the Company contrary to their own interests and of course their own inclinations, choosing in some instances to pay a heavy fine rather than be compelled so to work. They could get better prices from the Dutch, Portuguese, French and Arab merchants for inferior goods than the Company paid them for standard or superior goods ; that compulsion and punishment were carried to such a height as to induce several weavers to quit the profession.² It was, further, the object of the commercial residents to keep the weavers always under advance from the Company as the regulation of Lord Cornwallis provided that no party contracting to furnish Company's investment should be permitted to work either for himself or for a third party until he had completed his engagements. These regulations further authorised the commercial agent to place the contracting parties under surveillance of their native officers in order to expedite the completion of their contracts. In Lord Wellesley's well-known letter of 19th July 1804 to the Madras Government, a similar course of arbitrary proceeding is detailed as being the practice of the commercial factories under that Presidency.

There was a similar system of compulsion in the the silk industry. The Company had twelve filatures all over Bengal for the purpose of reeling silk. In 1769 the Company introduced into Bengal the exact mode of winding practised in the filatures of Italy and other parts of the

¹ Evidences of Rickards and Gordon before the Select Committee, 1832, Vol. IV, p. 477.

² Ans. 2846—Evidence before the Select Committee on East Indian Affairs, 1832.

Continent with the help of Italian and French reelers. The silk industry had three stages : the cultivation of mulberry, the rearing^{*} of worms and the winding of cocoons. The Company's commercial residents made advances to the pykars (wholesale dealers of the villages) who in their turn made advances to the growers and producers of silk. When they received advances from the Company they were prohibited from selling their produce to any other party even when the advance was small. It was an established practice of the Company's agents always to keep the silk-growers under advance.¹ It was almost impossible for the cocoon-rearers to free them from their perpetual engagements with the Company. It was pointed out by Mr. Bracken in his evidence before the Committee of 1832 that any attempt to make themselves independent, might expose them to much vexation and injury. Indeed the records of the Bengal Government would show many instances of silk filatures destroyed by the peons of the Commercial Residents, and of indigo plant ploughed up on the allegation that the ryots had engaged to cultivate the mulberry. Prices of cocoons were settled after their delivery and the sellers were compelled to accept a price dictated by the Residents. Even as late as 1827 the Board of Trade sent instructions to fix the prices of cocoons arbitrarily. "It will be your duty," they said, "to explain these matters fully to the peons and rearers of cocoons employed under your factory, so as to prepare their minds to submit, without murmuring to the prices you may deem it necessary, under these orders, to determine on granting them for the silk and cocoons produced during the several bunds of the year."²

The same arbitrary procedure was followed in the provision of saltpetre. In the saltpetre industry of the district of

¹ Evidence of Saunders, Report of the Select Committee, 1832, Vol. IV, p. 478.

² Letter of the Board of Trade, 27th April, 1827.

Gorakhpur, it was found by Dr. Buchanan that the Company's authority and monopoly enabled the Resident to purchase cheaper than an individual could.¹

The Company had five salt factories in Bengal. Salt was a monopoly of the Company for revenue purposes. There were 7,556 persons or families in the agency of Hidgelee and 5,832 in the agency of Tumlook who were coerced to manufacture salt at rates considerably less than were paid to persons making salt by contract or hire.²

It will, thus, be manifest from the evidence cited, that the monopolistic advantage of the Company backed by political power was applied against a people too ignorant and innocent to understand the nature of their transactions. But it was endorsed by a responsible man like the Right Hon'ble Henry Dundas. He thought, that, if the dealing with manufacturers was to be laid open to the uncontrolled competition of every individual, "the consequence would be a boundless scene of confusion and fraud and ultimately the ruin of the manufacturers themselves."³ The truth was, however, the opposite. It was the monopolistic system that was responsible for fraud. If the manufacturers had got remunerative price for their products, they would have voluntarily done their work and no compulsion would have been necessary at all.

The nineteenth century from the standpoint of economic development is a record of the gradual decline of indigenous industries. It was noticed before that the cotton manufacture was the great staple industry of the country and it was this industry that was first affected. Cotton industry was established at Manchester

¹ Martin, *History of Eastern India*, Vol. II, p. 563.

² Appendix to the Second Report of the Select Committee of 1810 on the affairs of the East India Company, p. 195.

³ Letter from the Right Hon'ble Henry Dundas to the East India Company, 2nd April 1800 (Appendix No. 47, papers concerning the trade between India and Europe).

the beginning of the eighteenth century but "Manchester cottons" were then a mixed fabric in which linen yarns were used for the warps of cotton goods.¹ The machines used in the cotton manufacture in England up to the year 1760 were nearly as simple as those of India.² But it was the Industrial Revolution that placed England in an advantageous position. The mechanical inventions that followed one after the other, revolutionised the cotton industry of the country and by the beginning of the 19th century it was established on a scale capable of exporting its products to foreign countries.

The following table illustrates the course of trade in cotton goods between England and India during 1801-1840.

Decline of exports of cotton manufactures and increase of imports.

Exports of cotton goods from India.			Imports of cotton goods from England.	
Pieces.	Value.		Cotton manuf- ture.	Cotton yarn. ³
			£	£
1801	1,684,267	£1,630,467	16,191	...
1811	855,575	£700,718	107,806	...
1822	366,497	£309,202	1,118,286 ⁴	805 ⁴
1830	196,479	...	1,738,717	324,955
1840	349,961	...	3,025,656	847,530

It will be manifest from the above figures that the export of Indian cotton goods to Great Britain reached its vanishing point by the year 1830, whereas the importation of

¹ Baines, *History of Cotton Manufacture*, p. 102.

² *Ibid.*, p. 115.

³ Cotton yarn was first imported into India in 1814, and the quantity imported was 8 lbs. valued at £7; vide MacGregor, *Report of British Trade with India*, p. 148.

⁴ Figure for 1821.

British piece goods and yarn advanced with galloping strides. The market for Indian manufactures was affected by the French Revolutionary War also. During 1804-05 large stocks of Indian goods accumulated in the London market, the re-export trade having almost ceased owing to war conditions. There was hardly any prospect of the revival of the re-export trade as the continental countries were also developing cotton manufacture at this time. Thus, we find Mr. Larkin remarking, "we should not be too sanguine that the demand for the piece goods of India can ever be so great as formerly, since numerous and extensive cloth factories have been recently established in the interior of France; and there as well as in England, the weavers have succeeded in imitating with so much exactness the fabrics of Bengal (particularly our coarse and middling assortments of Muslins) that there is every reason to believe, our trade in Muslins of this description whether for the home or foreign markets must inevitably dwindle to nothing."¹

There was, further, the consideration that the tariff policy of Great Britain was also in some measure responsible for the restriction of the sale of Indian piecegoods in Great Britain. It must, however, be admitted that the export trade was trifling in comparison with the Indian home market but yet the heavy duties did not fail to produce their effects. The export of piecegoods considerably decreased during 1790-1800, and Mr. Brown ascribed this decrease to the prevailing national system of duties and drawbacks.² The same opinion was expressed by the Court of Directors that as far as the use of the cotton fabrics was superseded in these kingdoms, by the cotton manufactures of this country aided by high protective duties

¹ Larkin, Report on the External Commerce of British India as carried on by Individuals in the year 1804-05.

² Extract from Mr. Brown's Report on the Import and Export Trade of Calcutta by Sea, 1801-02.

there appeared to be little prospect of recovery.¹ It should be observed that the rates of duty charged on Indian piece-goods were enormously high as the following figures will show :—

	East India white calicoes Per cent. ad. val.	East India Muslins and Nankins Per cent. ad. val.
1808	59	80
1804	65	84
1805	66	85
1809	71	87
1813	85	44
1814	67	
1825	10	87

There seems to be no doubt that these ruinously heavy duties raised the prices of Indian goods largely and restricted their market, when the expansion of market was itself a difficult matter due to high freight charges. It may, however, be argued that the re-export market was open and there was a drawback on re-export. But the merchants had to lock up such a large amount of capital when they brought the goods with the duty paid that this branch of trade was not considered profitable.²

In addition to the restrictive commercial policy pursued by Great Britain, the system of internal duties levied by the East India Company had its due share in crippling the industry. These duties were so heavy and vexatious that the handloom industry was placed at a considerable disadvantage in its competition with the machine-made products of Great Britain.³

¹ Letter from the Court of Directors to the Governor-General in Council, 20th June, 1810.

² *Ibid.*

³ For fuller details see the chapter on Fiscal Policy in the Nineteenth Century.

The decline of the cotton manufacturing industry has been continuous throughout the nineteenth century. The growing importation of machine-made goods threw the weavers out of employment. We have no record of the outbreak of riots among the weavers as we have in Great Britain resisting the introduction of machinery. The lot of the weavers of India has been one of silent suffering and calm resignation. As early as 1829 Lord William Bentinck visualised "the gloomy picture of a commercial revolution productive of so much suffering to numerous classes in India as is hardly to be paralleled in the history of commerce."¹ But it was during the latter half of the nineteenth century that the decline of the industry produced most serious effects. The improvement in the means of communication and transportation which mostly took place during this period, placed within the reach of the people the cheap fabrics of Manchester and of Indian mills. The industrial surveys undertaken towards the end of the 19th century describe vividly the effects of imported goods upon the indigenous industry. Thus, it was reported about Midnapore that half a century back, the indigenous manufacturers were in a flourishing condition for they commanded the local markets which have since been occupied by machine-made manufactures.² About the district of Hooghly it was reported that the weaving castes had gradually decreased to one-third of their number compared with their numbers about 20 years ago. In the district of Rajshahi nearly within the period of a single generation the number of villages in which the industry ceased to exist is 234.³ In the Presidency of Madras the weaving industry declined greatly in recent years owing to

Sufferings of hand-loom weavers.

¹ Minute of the Governor-General, dated the 30th May, 1829.

² N. N. Bannerjee, A Monograph on the Cotton Fabrics of Bengal, 1898, p. 8. *Ibid*, p. 9.

the importation of machine-made fabrics.¹ About the cotton-weaving industry of Oudh Dr. Birdwood said that in Oudh before its annexation a large number of lower classes were employed in weaving cotton and their looms paid a fixed annual duty to the King but the industry received a deadly blow directly it was exposed to the unrestricted competition of Manchester.² The cloth industry of Ludhiana has however declined on the whole, as its drills and gabroons are retiring before the products of the Bombay mills. Its *susi* has long disappeared.³ Broach under the East India Company was a great centre of cotton manufactures; but the industry was ruined by the unrestricted Manchester imports, and of the thirty varieties of cloths enumerated in the factory diary for 1777 only six were made.⁴ These accounts give an idea of the progressive decline of the staple industry of the country and we may deplore it. But this decay would have been inevitable under the circumstances. In the competition between machines aided by mechanical power and hand power the latter must ultimately yield to the former though it might struggle on for some time.

In the silk industry the decline did not commence so early as in the cotton industry. It has
 Decline of export of silk. been pointed out that up to the third quarter of the last century the export of raw silk gradually increased and it reached its maximum in 1875. But this corresponded with the period when the European silk industry was affected by the deadly disease of Pebrine which reduced the outturn of silk in France and Italy. It was towards the latter part of the nineteenth century that the

¹ Thurston, A Monograph on the Cotton Fabric Industry of the Madras Presidency, 1897.

² Birdwood, Industrial Arts of India, p. 247.

³ Jatif, Industrial Punjab.

⁴ Birdwood, Industrial Arts of India, p. 253.

decline became persistent as will appear from the following figures of export :—

	lbs. ¹
1876-80 (average)	1,074,887
1881-85	480,992
1886-90	486,516
1891-95	601,171
1896-1900	632,164

The causes of the decline of the Indian silk industry have been various. When the silk-worm disease known as Pebrine caused a havoc on the European silk industry an attempt was made to import disease-free seeds from all parts of the world specially from Japan. This led to an enormously increased production in Japan, to the production of better qualities in Europe and the demand for Bengal silk began to fall.² The competition of foreign countries in the consuming markets resulted in a sharp fall in the price of raw silk, the production of which gradually became unprofitable.³ To add to this, the high rent of mulberry lands compelled the cultivators to take to the production of other crops.⁴ The Indian industry was also affected by Pebrine which broke out in an epidemic form after 1875. There were further no improvements in the technical process of the industry, though the large producing countries such as Japan, Italy and France perfected the reeling process. The development of the artificial silk industry has also been responsible in some measure for the decline of the natural product.

¹ N. G. Mukherji, Monograph on Silk Fabrics.

² Maxwell Lefroy, Report on an Enquiry into the Silk Industry of India, p. 9.

³ In 1871-72 the price of raw silk was Rs. 23-10-7 per seer and in 1900-01 it was Rs. 14-8-6.

⁴ Rents of mulberry lands varied from Rs. 12 to Rs. 16 per bigha whereas rice lands had to pay Re. 1 or Re. 1-8 (see Maxwell Lefroy's Report, p. 9).

The silk-weaving industry has also largely declined, but this is attributed to a change in fashion. *Change of fashion.* In the Punjab it was reported in 1886-87 that silk fabrics were much less worn by the well-to-do classes than they were in Sikh times, as European broad cloth and cotton goods had to a large extent taken their place.¹ Imported silk goods also affected the industry. Thus, in the Punjab there is an almost universal complaint that the silk industry of the province is falling off. This is attributed largely to the competition of European goods which are ousting the native-made fabrics from the market.² At Maldah which was once a flourishing centre of silk industry, the same state of decadence is noticed, and for the same reason.³ The author of the Bombay monograph on silk similarly records with regret the decline of this industry. "The fabrics which he wove with steady persistence found ready sale, and provided the wherewithal to purchase raw material and to support the family. External competition and also internal calamity have confronted the weaver of every town."⁴

The growing imports of silk manufactures during the last thirty years of the 19th century testify in unmistakable terms to the state of silk weaving industry in the country.

Increased import of foreign silk manufactures.

	Piece goods (Yds.)
1870-71	4,053,411
1880-81	11,628,163
1890-91	10,032,619
1900-01	17,416,318

¹ A Monograph on the Silk Industry of the Punjab, 1886-87, p. 1.

² *Ibid*, p. 5.

³ N. G. Mukherji, A Monograph on the Silk Fabrics of Bengal, p. 66.

⁴ Bombay Monograph on Silk, p. 48.

The backward state of the industry is due as much to purchasers who prefer the gaudier articles of foreign manufacture as also to the want of organisation and enterprise on the part of the weavers.

The decline of the indigenous dyeing industry was manifest towards the end of the last century. "The native industry" maintained its flourishing condition until the appearance in Indian market about 30 years ago, of the European magenta dye, which in a few years proved a formidable rival to safflower. Later on, the introduction of a large number of other European dyes caused a revolution in the dyeing art of the country. Owing to their cheapness and the facility with which they can be used even by unskilled hands, they became more and more popular and gradually supplanted all the native dye-stuffs with the exception of indigo.¹ In the provinces of Bombay and Madras where the manufacture of indigenous dyes was at one time in a flourishing condition there is a similar record of decline.² This decline is due to advances in chemical science in Germany whose by-products from the coal-tar industry have captured the world's market.

The woollen industry was affected not so much by foreign competition as by a change in fashion. It is the manufacture of country-made medium stuffs that have suffered from foreign competition. But the shawl industry has declined because it has lost the patronage of the aristocracy of the country owing to a change in fashion. Bengal was an important customer of Kashmere and Amritsar shawl but overcoats and chesterfields made from imported stuffs have now taken the place of shawls. The causes of the decline

¹ Hadi, A Monograph on Dyes and Dyeing in the North-Western Provinces and Oudh, p. 3.

² See Monographs, Dyes and Dyeing in Bombay and Madras.

in the export of shawls and other pashamina goods are said to be (1) the loss of Paris market which was formerly the chief customer, (2) change of fashion in Europe, (3) adulteration in manufacture, (4) success in the production of Rampuri Chadar in England, (5) want of ingenuity in the production of new and artistic designs.¹

Indian artistic industries have greatly declined owing to diminished demand consequent on a change of taste and fashion. The manu-

Artistic industries. facture of carpets, however, has been stimulated owing to increased European demand but the quality of the product has suffered great deterioration. As Mr. Chatterjee observes : " The designs are generally of an occidental type which the weaver does not understand and consequently fails to render with skill." ² The Kalabatun industry of Benares within recent years has suffered and the causes of the decline are stated to be the following :—

(1) The use of gold thread imported from Lyons in France which is of inferior quality ;

(2) The use of false smoked kalabatun.

The artistic industries of India at present depend mostly on the demand of the tourists who buy these products as curios, but this demand is limited. The embroidery work of Dacca and Lucknow has greatly declined owing to a change in demand.

The above survey reveals the fact that the decay of indigenous industries is not to be attributed to one cause only but to various causes. Foreign competition has been an important factor no doubt but change of fashion coupled with the failure of the artisans to adapt themselves to changed conditions and taste and to introduce new designs of better workmanship has also played its due share. In

¹ A Monograph on the Woollen Manufactures of the Punjab, p. 10.

² A. C. Chatterjee, Notes on the Industries of the U. P., p. 63.

the case of the cotton industry it was not merely the tariff policy which brought about its decline but there were other causes such as the Industrial Revolution, the restriction of the European market during the French Revolutionary wars, the oppression of the weavers and the monopolistic control of the Company.

The effect of the decline of the indigenous industries has been a continuous tendency to ruralisation. There are no accurate figures relating to the proportion of people that derived their subsistence from agriculture in the beginning of the 19th century, but towards the end of the period this tendency has been persistent as will be evident from the following figures :—

Economic condition of the artisans.

Proportion of people engaged in agriculture.

1880	59·6
1891	61·06
1901	66
1911	72·2
1921	72·68

It was the weavers who were badly hit by the loss of occupation and who largely swelled the ranks of the agriculturists. Thus, in the district of Burdwan, it is reported that large numbers of weavers abandoned their looms and took up other pursuits. Indeed, very few families are to be found now who are wholly engaged in weaving alone.¹ A comparison of the census returns of 1872 and 1891 in the district of Pabna shows that in 1872 there were 20,534 persons engaged in weaving but in the latter year there were 13,031, and the rest were absorbed in agriculture.

¹ N. N. Banerjee, A Monograph on the Cotton Fabrics of Bengal, p. 8.

In Bihar in the district of Muzaffarpur the total number of weavers was reported to be 59,020 in 1891. About 25% did ply on their business as weavers, but the rest betook themselves to agriculture and other pursuits owing to very small profits obtained from the manufacture of cotton.¹ Even those who still clung to their hereditary occupation found their life miserable owing to the poor rate of remuneration paid to them. In the Allahabad district the following rates were current towards the end of the nineteenth century² :—

For weaving yarn into gazi	8	pies	per	yard.
„ Garha	4½	„	„	„
„ Dhoti	6	„	„	„

This would mean in the case of skilled workers 4 to 5 annas per day and in the case of unskilled workers 2 to 3 annas only. In 1888 Mr. T. N. Mukherjee expressed his surprise that the handloom industry was not yet extinct in the country and the reason assigned by him for its continuance was the low value of human labour in India. “Machinery,”² he said, “with all its modern improvements, seems to contend in vain with a moribund industry, that must linger on as long as the worker in it has nothing better to do than to produce from it four pence a day as the joint earnings of himself, his wife, a boy and a girl.”³

According to Mr Gupta the weavers' earnings in 1907 on an average did not come to more than Rs. 8 a month in Eastern Bengal and Rs 4 in Assam. That weaving therefore as a profession has not fewer followers than it actually has, is almost entirely due to the fact that a very large

¹ N. N. Bannerjee, *A Monograph on the Cotton Fabrics of Bengal*, p. 13.

² Silberrad, *A Monograph on the Cotton Fabrics in the North-Western Provinces and Oudh*.

³ T. N. Mukherji, *Arts and Manufactures of India*, p. 193.

percentage, perhaps 80 per cent., of the weavers are also engaged in agricultural pursuits.¹

In the Punjab Mr. Latifi writes : " The condition of the weaver is in all places, even where there is a flourishing trade in his goods, miserable. He is everywhere ignorant and impoverished and earns a bare subsistence for himself and his family by a handicraft which is becoming less and less profitable every day." ²

In the silk-weaving industry the condition prevalent did not differ much from that in the cotton industry. About the condition of the industry at Murshidabad it is observed that the wages of the silk-weavers did not exceed six annas a day and even on such terms there were times at which some weavers found the industry so unprofitable that they gave it up and in many cases took to agriculture, and others in the same subdivision abandoned the weaving of silk for that of cotton.³ In the Presidency of Bombay also the condition of the handloom silk-weavers is not different from what it obtains elsewhere. In Surat, Yeola and Poona where the industry still holds a leading place, the decline in the craftsman's position is noticeable. " The wages which the Deccan weaver can obtain compare unfavourably with the earnings of ten years ago." ⁴ In the dyeing and calico printing industries also the restriction in the demand for native dyed goods and the small profits obtained have of course led many dyers betaking themselves to other occupations such as agriculture, brick-laying and unskilled manual labour. Even in cases where they still work as dyers they often do not live exclusively by that trade but also cultivate land and work as labourers.⁵

¹ G. N. Gupta, *A Survey of the Industries and Resources of Eastern Bengal and Assam*, p. 14.

² Latifi, *Industrial Punjab*, p. 6.

³ N. G. Mukherji, *A Monograph on Silk Fabrics of Bengal*, p. 48.

⁴ *A Monograph upon the Silk Fabrics of the Bombay Presidency*, p. 48.

⁵ Fawcett, *A Monograph on Dyes and Dyeing in Bombay Presidency*, p. 7.

Village artisans such as blacksmiths and carpenters who mainly minister to the requirements of the agriculturists found a larger scope for their employment and improved their economic position. Where they were paid in kind the rise in the price of agricultural products placed them in a better position. The blacksmiths were also benefited by a lowering in the price of the raw material. The braziers also largely extended their business owing to the importation of cheap raw material such as copper and brass sheets. Where the artisans were paid money wages their economic condition greatly deteriorated. Their wages were nearly stationary but the price of necessities rose a good deal. The worst sufferers were the handloom weavers who were faced with a progressive diminution in their remuneration and at the same time with a rise in the price of provisions. The deterioration in the economic condition of the weavers has been minimised by some writers¹ on the ground that the weavers were not much better off in the beginning of the nineteenth century. Even in the beginning of the nineteenth century, it is found that the condition of the weavers was better than that of the agriculturist, and it is borne out from a statement in the report of Mr. Larkin who points out : " A man will earn more by his loom than by his plough, and it is not clear to me that the cultivation of the lands is a more advantageous mode of employing the weaver." ² In the palmy days of the trade in Dacca muslins, the Tantis were as a rule in very good circumstances. Most of them built *pucca* houses and some even went to the length of working only for five or six months in the year, and enjoying the rest of the time with the sale-proceeds of their muslins. Their present condition is deplorable and the sales are just sufficient to keep most of them from hand to mouth.³

¹ Collins, the Report on Arts and Industries of Bengal.

² Larkin, Extract from the report on the External Commerce of Bengal, 1804-05.

³ N. N. Bannerjee, A Monograph on the Cotton Fabrics of Bengal, p. 4.

CHAPTER II

CAPITALISTIC AGRICULTURE

The decline of indigenous industries has been partly compensated by the growth of modern industries, the beginning of which found its manifestation in capitalistic agriculture.

India—a land of small farming.

Agriculture has been carried on in India from time immemorial on a small scale and even now the process is the same over the whole country. Even where special products were grown for the market there was no exception to this general rule. Each farmer grew products just enough to cover his subsistence and the payment of rent. Where holdings were large they were let out in small parcels, the owner receiving his rent. But large farms with tenants cultivating with regular hired labour did not form a part of the economic organisation of the country.

Capitalistic farming introduced by British capital and enterprise.

The introduction of capitalistic farming for the exploitation of the resources of the country is to be traced to British enterprise and interests.

In the colonies the British people succeeded in establishing large farms with slave labour for growing special products suited to the requirements of the mother country and generally of Europe and this form of industry has been designated as the plantation industry. In India the production of indigo was the first plantation industry to

Indigo—the first plantation industry.

be started on a large scale. It was not a new product in the country but it received a great stimulus owing to the efforts of the Company to make it a staple product of the Indo-European trade. That indigo is an original product of Hindustan, is

proved by its name *Indicum* among ancient authors and hence it was until very recent times called 'Indico' in European commerce."¹ "Whatever the original source of supply," writes Mr. Moreland, "it is clear that indigo was the commodity chiefly sought by the first European buyers in India."²

During the first century of the commerce of the East India Company it formed a prominent article of their exportation but it was then produced in Western India and the Gangetic plain, the chief port of export being Surat. The successful introduction of indigo in the West Indies, however, obliged the Company to discontinue their imports from India. About the middle of the eighteenth century Europe was supplied by the Spaniards and the French who manufactured the finest kinds of indigo in St. Domingo. It was after the destruction of the indigo factories in an insurrection in St. Domingo, that the Court of Directors of the East India Company turned to India about the year 1779-80 for the supply of indigo. Europeans acquainted with West Indian

Indigo introduced
in Bengal.

methods were induced to proceed to Bengal to grow indigo for exportation to England.

That there was a great development in the production of indigo is borne out from trade figures. In 1777 the article indigo was unknown as an export or not exported, whereas in 1795-96 the quantity shipped from Calcutta to the port of London was 4,000,000 lbs.³

In their letter of the 30th May, 1792, the Court of Directors wrote : "It affords us much pleasure to remark that the article as to quality is still increasing in reputation. It has already surpassed the American and the French, and there is no doubt but, by perseverance and attention on the

¹ Boyle, *Essay on the Productive Resources of India*, p. 94.

² Moreland, *From Akbar to Aurangzeb*, p. 106.

³ Brown, *Report on the Import and Export Trade of Calcutta, 1795-96*.

part of the planters, it will effectually rival the Spanish."¹ Bengal was the largest producer of indigo. The moisture and the richness of the Bengal soil and climate are favourable to the luxuriant growth of the parts of vegetation from which the colouring matter is secreted. But other provinces also contributed to the supply. The total production of indigo amounted to 140,000 maunds distributed among the different provinces as follows :—

Bengal	...	40,763 Mds.
Behar	...	32,699 ..
Madras	...	34,000 ..
North-Western Provinces	...	21,648 ..
Other parts	...	10,982 ..
		<hr/> 140,000 Mds.

The value of this product at the average price of Rs. 200 per maund was nearly three crores of rupees. It would, thus, appear that indigo was a source of considerable wealth to the people of India but the system under which it was cultivated would show quite otherwise. The cultivation of indigo may be classified under two great heads : (1) the *Nijabad, i.e.,* cultivation by the planter in his farm with hired labour ; (2) *Raiyati, i.e.,* cultivation by tenants in their farms. The greater portion of indigo cultivation was under the *Raiyati* system as the cultivation by the planters themselves was not profitable to them.² There was, further, another difficulty in the way of cultivation by the planters, as the

Systems under which
indigo was cultivated.

¹ Report of the Proceedings of the East India Company in regard to the Culture and Manufacture of Indigo, p. 5.

² Minute of the Lieutenant Governor on the Report of the Indigo Commission (see p. 75, Papers relating to Indigo Cultivation)

Europeans were not allowed by law to hold land and where they had Nijabad cultivation, the land was held in the name of their subordinates. Under the raiyati system of cultivation advances of cash were given to the cultivators who entered into contracts with the planters for the cultivation of indigo and these contracts were either for one year or varied from three to five or ten years. The advances were invariably at the rate of two rupees per bigha and for this sum the raiyat agreed to give lands suited for indigo, to prepare them to sow indigo, weed it and deliver the plant at the factory. The plant delivered was made into bundles which were measured by a six-foot chain passed round the centre of the plants. Credit was then given to the raiyat at a rate which ranged from four to six or eight bundles for the rupee.

To his credit was set down the value of the product and to his debit (1) advances, (2) cost of the stamp, (3) cost of the seed, (4) cost of carting.

There was another system called Shouk Dadan, i.e., free advances under which the raiyat was not charged for seed or cutting. He had only to cultivate and sow and was paid at from four to six bundles per rupee. The system prevalent in Behar was slightly different from that of Bengal. The raiyat was given advance at the rate of rupees three per bigha. This advance was not carried on as a debt against the raiyat if there was a failure of the crop but he used to get an additional rupee for his labour. The maximum amount that he could get over his advances was Rs. 3-6-0, so that however excellent the crop might be the raiyat would not get more than Rs. 6-6-0.

The system of indigo cultivation as pursued in Bengal was not voluntary but the raiyats were compelled to receive advances to sow indigo. That it was attended with grave abuses and was the source of oppression to the raiyat was

Compulsory cultivation of indigo.

recognised by Government as early as 1810. The compulsory nature of the cultivation of indigo by the raiyats was evident from a circular, dated the 22nd July of 1810, when the Magistrates were directed to report all proved instances of planters convicted of "obliging the raiyats who reside in the vicinity of their respective factories, to receive advances and of adopting other illicit and improper means to compel them to cultivate indigo."¹ The force and violence with which the cultivation of indigo was continued were recognised by the Court of Directors in 1828. In their letter to the Government of Bengal they pointed out.—"The lawless violence of indigo planters in the interior of the country was strongly animadverted upon in the circular orders issued by the Government on 13th and 20th July, 1810, and we see with regret that it has not been repressed. In some places these persons keep large establishments for supporting their claims by force and they or their servants become involved in violent affrays or other breaches of the law."² In 1823 a law (Indigo VI of 1823) was passed which insisted on two things—first there should be contract in writing and second that the contract should refer to a piece of ground with defined boundaries. The raiyats had practically no protection under this law as they were mostly illiterate and at the mercy of the factory servants. This law was, however, more honoured in its breach than in its observance.³ The finding of the Indigo Commission on the question of the

¹ Minute by the Lieutenant Governor of Bengal, on the Report of the Indigo Commission.

² Extract from Judicial Letter to Bengal, dated the 6th August, 1828.

³ Minutes of Evidence before the Indigo Commission, p. 287 (Evidence of Mr. Latour, Sessions Judge of 24-Pergannas): "I charge upon the Indigo planters, so far as my experience in the Furriddpur district goes, that they have grossly violated the essentials of law. The people in Furriddpur during my investigation took me into their villages, showed me their houses with the indigo plant growing up their very doors. The planter dispensed with any written agreement. Ryat's signature was taken to a blank stamp paper."

exploitation of the raiyats by the planters was conclusive as will appear from the following statement.—“ We feel that it is incumbent on us first to place in the strongest and clearest light, the raiyat as he appears to us, deprived of his free will and bound to continue a cultivation, which does not give him a fair or adequate profit, which in its worst aspect he absolutely dislikes, and in its favourable aspect, he is only induced to tolerate. All the defects of the system, inherent and incidental, all the faults which justly are to be laid at the door of either planter or raiyat, by their respective opponents, may be traced originally to one bare fact, the want of adequate remuneration. It is that which mainly renders the possession of landed influence indispensable to extensive cultivation and it is owing to this that the planter has to urge the raiyat to plough and to sow, to weed and to cut by means little short of actual compulsion.”¹

The raiyats were kept in a state of bondage by the system of advances. It matters little whether the raiyat took his original advances with reluctance or cheerfulness, the result in either case is the same ; he is never afterwards a freeman.² Not only the raiyat who took advances became the bondsman of the planter but his descendants could not escape it. It was asserted by the raiyats and admitted by the planters before the Indigo Commission that many of the raiyats were not allowed to clear their amount and were as it were hereditary cultivators working under old advances and that the practical effect of the system was “ that the son sows because he believes that he is responsible for his father’s debts.”³ From the statement given below, of the accounts of two

¹ Report of the Indigo Commission, p. 21.

² *Ibid*, p. 27.

³ *Ibid*, p. 17.

raiyats it will be manifest how the debts were carried over from year to year.

Credit.		Debit.	
	Rs. as. p.		Rs. as. p.
Indigo plant delivered acc. to book, 67½ bundles at 6 bundles per rupee.	11 4 0	Balance of 1858, page No. 174 for 3½ bighas.	80 6 7
Seeds delivered ...	0 4 0	This year's advances ...	8 0 0
	11 8 0	Stamp ...	0 4 0
		TOTAL ...	89 10 7
		Expenses of cultivation ...	0 10 0
		Cutting of plant ...	0 8 0
		Price of seed ...	1 12 0
		Carting ...	0 18 6
		TOTAL ...	43 6 1
		Deduct received ...	11 8 0
		Balance against the raiyat ...	31 14 1
Indigo plant delivered according to account, 37½ bundles at 6 bundles per rupee.	6 4 0	Balance of 1858 at page No. 167 on three bighas and one additional bigha or 4 bighas in all.	59 2 0
		Present advances ...	2 8 0
		Stamp ...	0 8 0
		TOTAL ...	62 2 0
		Expenses of cutting the plant ...	0 8 0
		Price of seed ...	2 2 9
		Carting ...	0 7 6
		TOTAL ...	65 4 3
		Deduct received ...	6 4 0
		*Balance against the raiyat ...	59 0 3

The unprofitableness of the cultivation of indigo by the tenants was demonstrated by the then Lieutenant-Governor, Sir P. Grant. He put the absolute loss to the raiyat at a low

Indigo cultivation unprofitable.

average, reckoning the net loss of cultivation of indigo at the highest price allowed, and the loss of the net profit the raiyat would make by any other ordinary crop at the market price, at not less than seven rupees a bigha, equivalent at least to seven times the rent of the land.¹ Of the twenty-two thousand three hundred indigo raiyats who cultivated for the Bengal Indigo Company's concern in 1858-59 only 2,448 were shown to have received any payment for plant delivery beyond the trifle of cash advanced.² It is no wonder therefore that the raiyats were unwilling to continue the cultivation of indigo when once they came to know that indigo cultivation was optional with them and the culmination of it came in 1860 when they in a body refused to sow indigo.

The law of the country was, between 1830 and 1835, against the raiyats. The regulation of 1830 made the raiyats who broke indigo contracts liable to prosecution and penal consequences. This law was held by the Home Government manifestly unjust and oppressive as it treated only one of the two parties to a civil contract as a criminal if he failed to fulfil and consequently it was repealed in 1835. For over three quarters of a century the raiyats were emasculated by a system which compelled them to cultivate a crop which brought them no profits and converted them into serfs.³

¹ Minute of the Lieutenant-Governor, p. 77.

² *Ibid*, p. 79.

³ It is interesting however to study the value and outturn per bigha of other agricultural products at this time.

Jessore.				Murshidabad.			
Outturn.		Value.		Outturn.		Value.	
	Mds.		Rs. as.		Mds.		Rs. as.
Rice (early)	16		14 0		9		20 4
Rice (late)	20		20 0		10		20 0
Tobacco	5		33 2		8		32 0
Jute	6		18 12		13		26 0
Mustard	3		8 10		3		9 0
Sugarcane			50 0				30 0

In Bengal proper the cultivation of indigo gradually declined as other crops became more profitable, but in other provinces it held its position till the end of the 19th century. The introduction of synthetic indigo in 1897 gave a serious and final blow to the industry. In 1904-1905, Mr. J. A. Robertson wrote : "The unremunerative level to which prices have been forced down by the competition of synthetic indigo, has reduced the indigo plantations of Bengal to less than half the area they occupied ten years ago, and over the whole of India the reduction in that period was 66 per cent."¹ Sir Edward Law had still faith in the recovery of the indigo industry provided improvements were effected on the lines indicated as follows :—(1) that the plantations should be placed on a sound financial basis, (2) economy in management, (3) selection of seed and propagation of the qualities yielding the highest percentage of indigotin and best suited to local conditions of climate and soil, (4) rotation of crops to obtain good profits from the land when not under indigo, (5) chemical improvements in the manufacture.² To what extent these suggestions have been followed it is difficult to say but the contest between the synthetic product and natural indigo remains unequal.

It is at present an unimportant article of Indian commerce and its production is concentrated mainly in Bihar. In 1918 the Indian Industrial Commission expressed the opinion that natural indigo, if cultivated and manufactured on scientific lines, would offer prospects of great improvement, probably sufficient to enable it to hold its own in competition with synthetic indigo.³ But so great has been the fall in the price of synthetic indigo that the growers of

¹ Review of Indian Trade, 1904-1905, pp. 28-29.

² Sir Edward Law, Budget Speech, 1904-1905.

³ Report of the Indian Industrial Commission, p. 1

natural indigo find their business less profitable every year and it is doubtful if it will ever revive.

The introduction of tea cultivation in India is due

Tea cultivation.

entirely to British enterprise and initiative. It is an industry of considerable

importance and magnitude and is localised mainly in Assam and Bengal. The industry is mainly a product of the latter half of the nineteenth century though efforts to establish it may be traced as far back as the thirties. It was in 1829 that one Mr. Walker drew the attention of the Court of Directors to the subject of tea cultivation in India. In the beginning of the 19th century, tea required by Great Britain for her consumption was imported mainly from China. The consumption of tea in Great Britain at this time exceeded 25 million pounds, and in his memorandum to the Court of Directors, Mr. Walker emphasised the danger of the dependence of Great Britain upon China for the supply of tea owing

The policy of making
Great Britain independent of foreign supply.

to the uncertainty of the commercial relations of Great Britain with that country. "That, if in future," said Mr.

Walker, "we are not rendered independent of the Chinese, by producing tea from our own territories and colonies, it will be our own fault, and we shall merit continuation of that insolence from the Chinese Government which all the publications relating to the embassies of Lord Macartney and Lord Amherst so amply and so minutely describe, as well as the unremitting extortions and the persecution of the Chinese officers to the few agents who carry on the trade at Canton."¹ In the same memorandum he suggested that India offered the most promising field for experiments in tea cultivation as, from the most correct information which could be obtained, it was not perhaps possible upon the face of the globe to find a country so admirably suited as the

¹ Papers relating to Tea Cultivation, p. 8.

districts of India, where the soil, climate and low price of labour combined with the quiet and peaceful habits of the neighbouring population, offered such a concurrence of circumstances. It was, therefore, proposed that the East India Company should resolutely undertake the cultivation of tea upon the Nepal hills and other districts where *Camellia* and other plants of a character similar to the tea plant were indigenous.¹

In 1834, Lord William Bentinck appointed a Committee to consider the question of tea cultivation in India. In their minute dated the 12th May, the Committee expressed the opinion that there was good reason to believe, that there were parts of the Company's dominions which presented such features of climate and soil as would warrant the expectation that the tea plant might be successfully introduced into them with a view to commercial purposes.² They consequently recommended that an experiment might be made with great probability of success in the lower hills and valleys of the Himalayan range, the eastern frontier or the Nilgirry and other lofty mountains in Southern and Central India.

Little was known at this time of the existence of tea as an indigenous plant of the country. It is recorded that in 1826 a Mr. Bruce found tea plant in its indigenous state in Assam and brought down certain plants and seeds which were identified as belonging to the tea of commerce.³ The Tea Committee, however, recorded that they were acquainted with the fact that so far back as 1826, the late Mr. David Scott sent down from Manipore specimens of the leaves of a shrub which he insisted upon being real tea and that a similar assertion was strongly urged in regard to the existence of

¹ Papers relating to Tea Cultivation, p. 10.

² Extract, India Revenue Consultations, 12th May, 1834.

³ Campbell, Note on Tea Planting in Assam.

tea in Upper Assam. As the Committee entertained doubts about this claim, they sent their Secretary, Mr. Gordon, to China to procure seeds and a number of Chinese planters to conduct the experiment in India. It was, however, meantime discovered and definitely established by Captain Jenkins that tea plant was indigenous in Upper Assam. This discovery placed the matter of tea cultivation on quite a different footing. The question simply was whether the shrub could be extensively cultivated for commercial purpose and whether it could be introduced into Kumaon and other north-western parts of the country. A deputation was sent to Assam to enquire into the commercial possibility of tea cultivation in India and Mr. Griffiths, a member of the deputation, arrived at the following conclusions regarding the suitability of Assam for tea cultivation :—

Suitability of Assam for tea cultivation.

(1) The tea plant is indigenous to and distributed extensively over large portions of Upper Assam; (2) there is a similarity in configuration between the Valley of Assam and two of the best known tea provinces of China; (3) there is a similarity between the climates of the two countries with regard to temperature and humidity; (4) there is a similarity both in the associated and the general vegetation of both Assam and those parts of the Chinese tea provinces situated in or near above the same latitudes.¹

In March 1835, sanction was given for the establishment of tea nurseries in Upper Assam under Government control and management and Chinese cultivators and artisans were introduced in 1837. In 1838 some of the manufactured tea was sent to England and met with a most favourable reception. Assam tea was regarded as a curiosity, and the first eight

Experiments in Government plantation.

¹ Extract, India Revenue Consultations, 7th January, 1835. Who the real discoverer of tea in India was, it is difficult to say in view of conflicting evidence.

² Papers relating to Tea Cultivation, p. 107.

chests which were put up to auction fetched a price which at the present day would seem little short of fabulous, the prices paid ranging from 16s. to £1-14s.-0 a pound.¹ The British mercantile world welcomed it as a suitable line of investment with the result that in 1839 a company, which was afterwards styled as the Assam Company, was formed for developing tea plantation in Assam. The Government made over two-thirds of its gardens to this Company in 1840 and subsequently retired altogether from the field leaving the matter entirely to private enterprise.

The early career of this Company was marked by failure as will be apparent from the fact that in 1846-47 the shares of the Company on which £20 had been paid had become well nigh unsaleable, and some shares were said to have been sold for half a crown a piece. The prospects, however, began to improve about 1852 ; and in 1859 it was reported that there was a cultivated area of about 3,967 acres with an estimated outturn of 760,000 lbs. of tea.² Meantime, cultivation of tea was attempted at other places. Thus, in 1840 Dr. Campbell started experimental cultivation of tea at Darjeeling, and it was soon found that the plant readily thrived at this altitude and others began to follow Dr. Campbell's example.

In 1852 Mr. Jackson in his report on Darjeeling remarked : " I have seen several plantations in various stages of advancement both of the Assam and China plant and I have found the plants healthy and vigorous showing that the soil is well adapted for the cultivation of tea."³ These plantations were, however, merely experimental plots

¹ Assam District Gazetteer, Vol. VII, p. 141.

² Edgar, Report on Tea Cultivation, p. 13.

³ Selections from the Records of the Bengal Government, No. XVII.

but by the year 1856 the industry began to be developed on an extensive scale especially on the lower^{*} slopes.¹ In 1855 indigenous tea was found in Cachar and in the same year a garden was established there. In the following year tea was discovered in Sylhet but no attempt was made to cultivate it till at a later date. Thus, the year 1856 may accordingly be taken as the date at which the industry was established as a commercial enterprise.

The cultivation of tea was encouraged by the Government by the very easy terms on which land could be settled. Large tracts of waste land were available in Assam. The disposal of this waste land was regulated by the clearance rules of 1854. It was provided in these rules that (1) no grant of less area than 500 acres should be made under them ; (2) that the applicants should deposit sufficient sums of money to provide for the proper survey of the boundaries by a competent surveyor ; (3) that one-fourth of the area of each grant should be rent-free for ever, the remaining three-fourths to be rent-free for 15 years, after which, it was to be assessed at 3 annas an acre for ten years and at 6 annas an acre for 74 years after which it was liable to reassessment ; (4) it was also provided that one-eighth of the grant should be cleared and rendered fit for cultivation in five years from date of lease, one-fourth in ten years and one half in twenty years and three-fourths in thirty years failing which it was to be resumed. In order to prevent land jobbing, precautions were at first taken that the applicants were to prove that they had sufficient means to cultivate the lands applied for. These rules and precautions were resented by the planters and pressure was brought to bear upon the

¹ In the District of Darjeeling the first trial of the tea plant was made in 1841 with a few seeds grown in Kumaon from the China stock. It was not till 1856 that the first plantation was started at Kurseong and another at Darjeeling by Captain Samber who was also the first to grow coffee. Darjeeling District Gazetteer, p. 73.

Government to introduce easier terms. It must, however, be admitted that easier terms were necessary to encourage the cultivation of tea in an inhospitable region but the unwarranted relaxation of the rules of 1854 in 1861 was responsible for an unhealthy speculation which overtook the industry in 1863.

Under the fee simple rules of 1861 the following terms were offered :

(1) All unassessed waste lands in which no right of proprietorship or occupancy was shown to exist, should be available for purchase, unless specially reserved by Government.

(2) No lot was to exceed 3,000 acres but there was no limitation to the number of lots any one person might obtain.

(3) Each lot was to be put up to auction at an upset price of Rs. 2-8-0 an acre.

(4) The price might be paid in instalments within ten years of the completion of the purchase.

(5) All grantees of leasehold were allowed to redeem in perpetuity the future revenue of their grants. The condition of survey and demarcation of lots was suspended. The effects of this extreme liberality in the disposal of waste land were very serious. Many cultivators were deprived of their rights as it was impossible for them in many cases to find out that their rights were imperilled till the auction was over and the delivery of the land given.¹ Government also was deprived under these rules of growing revenue as land was bound to have increased in value with the growth of population.

But the serious effect from the point of view of the industry was the reckless speculation and rash attempts to extend cultivation which led to the depression of the industry in

Speculation followed
by depression.

¹ Edgar, Report on Tea Cultivation, p. 17.

1863 and the following years.¹ There was a great rush for land and the company promoters held out before the speculating public, the possibility of making large fortunes out of tea. Land was hastily cleared of jungles, a few plants were hurriedly put in and the place was sold to the unsuspecting public as a flourishing tea garden. To such a pitch was this gamble carried that "There is one case on record in which a manager received instructions from London to clear and plant a certain area of waste land for delivery to a company to whom it had been already sold as a tea plantation."² As a consequence of this unhealthy boom a large number of concerns floated under unfavourable conditions collapsed during 1866 to 1868. The industry, however, took a favourable turn in 1869 and it was discovered that properly managed gardens could be worked at a satisfactory profit. The progress of the Assam tea industry may be gauged from the following figures :—

Progress of the Industry up to 1871.

Year.	No. of gardens.	Area (acres).	Outturn (lbs.).
1850	1	1,876	216,000
1853	10	2,425	366,700
1859	48	7,500	1,205,680
1869	260	25,174	4,714,760
1871	295	310,303	6,261,143

In the District of Darjeeling the development of this industry was equally marked. By the end of 1866 there were no less than 39 gardens with 10,000 acres under cultivation.

¹ Edgar, Report on Tea Cultivation, p. 18.

² Assam District Gazetteer, Vol. VII, p. 143.

In 1874 the number of gardens rose to 113 and the area under cultivation to 18,888 acres. In other words, between 1866 and 1874 the number of gardens under tea was almost exactly trebled and the area under cultivation increased by 82% while the outturn of tea was multiplied ten times.

From the very beginning of tea industry, the problem of the adequate labour supply presented considerable difficulty. This difficulty was due to the scanty population of Assam. Though there was surplus labour in the neighbouring provinces, the lack of adequate transportation facilities and the damp and malarious climate of the country produced a deterrent effect upon labour supply. The planters consequently attempted to import labour from up-country districts through contractors in Calcutta. The recruitment and transport of labour were attended with serious abuses comparable only with those that fall to the lot of slave labour in the colonies. The labourers were very often deceived by unprincipled recruiters who held out prospects of high wages and cheap living. But, when they landed in the gardens "they found themselves set down in a swampy jungle, far from human habitation, where food was scarce and dear and where their families and fellow labourers were struck down by disease."¹ The transport of labour from Calcutta to Assam was a matter of considerable difficulty. The labourers bound for Assam had to be conveyed in boats and the journey took months. "There was little regard for sanitary arrangement and proper food and very often cholera broke out on board and hundreds of labourers perished before they reached their destination. The recruitment of labour for the Assam gardens was thus a byword for reproach and it was notorious that from the time they were recruited till they reached their final destination "they were guarded not unlike prisoners."

¹ Edgar, Report on Tea Cultivation, p. 20.

In the early days of the industry the mortality among immigrants was appalling. During 1863 and 1866 out of 84,915 labourers 31,876 died or absconded. Between 1st of July, 1865, and the 30th June, 1866, 9,147 labourers were returned as having died and 3,187 as having absconded.¹ The Tea Commission in 1868 found that in seven gardens in Upper Assam the recorded mortality for half year only in 1865 ranged from 16 to 39 p.c. The high mortality among the labourers was attributed to several causes. It was pointed out that the epidemics that broke out on the passage up sometimes carried off as many as 20 p.c. of the number. The inhospitable climate of the locality was particularly calculated to generate diseases. There were no arrangements for housing the labourers or for medical aid and the consequences were revolting to humanity. The want of sufficient food was also a great cause of sickness and mortality among the labourers. This miserable condition of labour was in a great measure attributed to want of responsibility on the part of the planters. Thus Campbell wrote, "It was against the interests of planters to leave their coolies houseless, to give them insufficient food and to make no provision for medical aid and yet all these acts of neglect had occurred."²

The early planters in their rush for rapid expansion left out of calculation the imperfect machinery of distribution and the deficiency in the means of communication and years had to elapse before the supply of food became really sufficient. In addition to these difficulties, the labourers were often subjected to inhuman treatment at the hands of unsympathetic planters. Edgar feelingly wrote, "The miseries of the early immigrants were in too many instances aggravated by the ill-treatment of their employers. The coolies

¹ Edgar, *Report on Tea Cultivation*, p. 21.

² Campbell, *Note on Tea-planting in Assam*, p. 85.

were tied up and flogged when the amount of daily task did not come up to what the manager considered they ought to do. The coolies were always on the look out for opportunities to escape from the miserable slavery but the planters did all they could in their power to prevent it. Chowkidars were posted at every possible outlet from the cooly lines, which in some instances were closed by high pallisades, outside which the coolies were not allowed at night."¹

The maintenance of the labour force in the unhealthy tracts of Assam was a problem of almost insuperable difficulty from the very beginning. Pecuniary inducement was not enough to keep an effective control over labour and the planting community, consequently, sought the protection of law. It is a melancholy instance of exploitation of an illiterate people compelled by sheer economic necessity to leave their home for a distant land. It is true, that the planters invested a large amount of capital in their business and they expected a fair return on it but they ought to have recognised that they were bound to make the lives of the labourers worth living. But, instead of that they showed a callous indifference to the interests of labour and fortified themselves with legal powers to control the supply of labour.

The recruitment of labour for the tea industry was attended with so much abuse that Government felt it imperative to interfere in the interests of humanity. In 1862 a bill was introduced in the Legislative Council of Bengal for the control of recruits and also for their proper transport. Government were impressed by the fact that the absence of a specific engagement on starting between the employer and the labourer "opened a road to an immense amount of false statements and exaggeration on the part of the recruiters."² It was, therefore, provided that the contractors

Labour emigration
Legislation Act of
1863.

¹ Edgar, Note on Tea planting in Assam, p. 23.

² Proceedings of the Bengal Legislative Council, 1862.

and the recruiters were to be licensed and the emigration of labour was to be under the supervision of protective officers. It was also provided that the recruiter must take the coolies to a Magistrate who would see that they understood the nature of their engagement. With these provisions was passed the Act of 1863, though a modest measure, it accepted the principle of protecting the labourer.

This Act, however, failed to stop the abuses which it was designed to remove. Further, as the Act
 Act of 1865. related mainly to the transport of recruits it could not deal with the evils that cropped up after their arrival in the garden. The Act insisted on a written contract between the employer and the labourer but the latter was ignorant of the nature of the work and its money measure. "A tariff of task work is shown him in Calcutta and in entire ignorance of the nature of the work he accepts the terms offered ; but on arriving at the plantation he finds that under this tariff he is unable to earn as much as he would have received in the immediate neighbourhood of his house." ¹ The labourers incurred the risks and dangers of distant service to better their condition but they were disillusioned as the "average rate of wages received by the labourers was Rs. 3-8 per mensem," and they willingly incurred the liability to punishment in the hope of being set free from their contract. In order to keep control over the unwilling labourers the planters had to take recourse to Workmens' Breach of Contract Act of 1859 which provided criminal punishment in case of breach of contract by any labourer or worker who had taken advances for work. The whole system was thus based on a policy of exploitation of labourers lured by false and exaggerated hopes.

The planters insisted that having incurred a good deal of cost in recruitment they should have an effective control over their labourers in order to prevent wilful absence or

¹ Proceedings of the Bengal Legislative Council, 1865.

desertion. But such powers would really be unnecessary if the work was attractive and paying.

The Act of 1863 was modified in 1865 to provide that every contract should secure to the labourer a minimum wage allowing him to earn what he could by extra work. The minimum wage fixed was Rs. 5 for an adult male, Rs. 4 for an adult female and Rs. 3 for children. Having guaranteed this minimum wage, it was provided that the labourers would be liable to imprisonment for breach of contract for three months for the first desertion and six months for a second offence. The planters were armed with legal powers to apprehend deserting labourers without a warrant. Thus, the Act of 1865 has been called the Assam Labour Indenture Act. But, inspite of this legislation, the evils of recruitment did not abate and Government were compelled in 1870 to prohibit free emigration. But this prohibition of free movement of labour was opposed on the ground of principle with the result that a new Act was passed in 1873. This Act permitted

The Act of 1873.

emigration by three methods—(1) entirely voluntary emigration, (2) by contractors licensed by the Government, and (3) by garden sardars appointed by the agents of the tea planters and certificated by the Government with a limitation regarding the number of recruits. This Act also limited the contract of service to three years.

The development of the industry after 1873 greatly increased the demand for labour but the

The Act of 1882.

supply was far short of it. In 1881 a memorial was addressed to the Government of India by the Indian Tea Districts Association, London, emphasising that "the sole impediment to the continuous development of the industry is the difficulty of obtaining an adequate supply of labour on terms admitting of its profitable employment,"¹ and this difficulty was attributed to an excessive

¹ Proceedings of the Legislative Council of the Governor-General in Council, 1881, p. 173.

cost of recruitment and transport and to the stringency of the labour laws. The memorialists alleged, that the Emigration Act did not afford sufficient encouragement to free emigration and it imposed an unnecessary restriction upon sardari recruiting, and it did not provide for the enforcement of contracts made otherwise than under the provisions of the Act.

It was, further, proposed that the period of contract in accordance with the analogy of emigration to colonies should be five years in place of three years. When a bill embodying these changes was introduced, the British Indian Association opposed the introduction of free emigration as under its cover the greatest possible mischief to ignorant men was done. Maharaja Sir Jatindramohan Tagore opposed the bill on the ground that "the encouragement of free labour and the extension of period of contract were two inconsistent things." But in spite of opposition the bill became law in 1882.

It was thought by the framers of the Act of 1832 that as the means of communication was rapidly developing the supply of labour on a voluntary basis would increase, and the need for control of recruitment would become less. But this expectation was falsified. "There is overwhelming evidence," said the Hon'ble Mr. Rivaz, "that under the guise of free emigration, an organised system of professional recruiting has sprung up which is not distinguishable from the professional recruiting recognised and licensed and controlled by the Act, save that it is entirely free from control and that it resorts with impunity to fraud, kidnapping, abduction of women and other malpractices."¹ The unlicensed recruiter instead of registering and putting his recruits under labour contract in Bengal carried them off

¹ Proceedings of the Legislative Council of the Governor General, 1899, p. 340.

under supervision to Assam and there placed them under contract. Referring to free recruitment ^{Evils of free recruiting.} the Labour Commission of 1894 re-

marked, "The results of this system have been brought very prominently into notice, and cannot but be characterised as deplorable in the extreme; indeed if common rumour be true, free recruiting is looked upon here as a species of licensed abduction."¹ The situation was so serious that Government again felt the imperative necessity of putting

^{The Act of 1901.} an end to unlicensed recruiting. A bill was introduced in the Central Legislature with provisions empowering the Local Governments to prohibit all persons from recruiting or engaging or assisting any labourer to emigrate to the labour districts otherwise than in accordance with the provisions of the Act. It was also provided that the licensed recruiters should register the emigrant in the district in which he was recruited or at some central place near such district. Recruitment carried on by garden sardars was, however, permitted as this did not result in any abuse.

Another important proposal of the bill was to raise the minimum wage by a rupee. The Act of 1882 made a provision for the increase of minimum wage by a rupee after three years of service but this was not given effect to. The average monthly earnings of the labourers in 1899 in the tea industry were as follows :—

Act Coolies				Rs.	A.	P.
Men	...	...	..	4	12	0
Women	...	...	..	3	11	3
Non-Act Coolies						
Men	...	...	..	5	4	4
Women	...	...	..	3	12	0
Children	...	...	..	2	4	10

¹ Report of the Labour Enquiry Commission, p. 31.

It will be manifest from these figures that even the minimum guaranteed by law was not secured to the labourers in many cases. The economic condition of the labourers was rendered worse by the prevailing rise in the prices of food-stuffs and their wages remained practically stationary since 1865 when the minimum wage was fixed. But this modest

Proposal to raise the minimum wage opposed by planters.

measure on the part of the Government to raise the minimum wage met with considerable opposition from the planters.

"The labourer," Mr. Buckingham said, "is as a rule contented and well-to-do, many of them possessing poultry, pigs, cattle and even rice fields to cultivate when such are close to the garden.¹ One can easily imagine the conception of being well-to-do with an income of Rs. 4-12 a month which, as Mr. Cotton said, "barely covered the cost of subsistence of a single soul not to speak of maintaining a family."

But the opposition was so powerful that Government had to conciliate them by a compromise to maintain the present wage rate of five rupees for a man and four for a woman in the first year and to raise it by 8 annas a month in the second and third years so as to reach the maximum in the fourth year.

These provisions were embodied in the Assam Labour Emigration Act of 1901.

The Act of 1901 did not, however, provide a final solution of the problem of labour supply for the Assam tea gardens. The growing political consciousness in the country led thoughtful men to express resentment at the penal provisions of the Act. At the same time, the abuses connected with the recruitment of labour by the contractors continued. The Government of India by various notifications withdrew the penal provisions of the Act and finally in 1915 the recruitment of labour by the contractors was stopped. It

¹ Proceedings of the Legislative Council of the Governor-General in Council, 1901, p. 56.

was recognised that improvement in the means of communication so altered the situation that the movement of labour to Assam should be left entirely to economic considerations. For the supervision of recruitment a Labour Board was set up consisting of the representative of the planting interest as also of the public. The Labour Board was also responsible for the enforcement of the rules regulating the conditions of work and welfare of the labourers.

It might be imagined that the repeal of the penal provisions of the Act of 1901 made the labourers wholly free. But, as a matter of fact, the effect was to a great extent nullified by the practice of entering into long-term labour contracts under the Workmen's Breach of Contract Act of 1859 for periods varying from 626 to 939 days.

Under this Act, a labourer having taken monetary advance from his employer might be prosecuted for non-performance of his contract and the planters retained hold over their labour force with the help of this Act. The Government of Bengal held that the placing of unindentured labourers recruited through approved associations, under a penal contract under the Workmen's Breach of Contract Act of 1859 immediately on arrival in the garden "was an evasion of the spirit of the agreement between the Association and the Government." ¹

The Act of 1859 was, however, considerably modified in 1920. The Amending Act vested the Magistrate with discretionary power to refuse to put the Act in operation if he considered the terms of the contract substantially unfair to the workman. The Magistrate was also empowered to order at his discretion either repayment of the advance or performance of the contract and was no longer bound by the option of the complainant.

¹ Report of the Assam Labour Enquiry Committee, 1921-22, p. 88.

In the Legislative Assembly on the 10th September, 1921, Mr. Joshi brought forward a resolution that the Workmen's Breach of Contract Act should be repealed, and Government adopted the view that the repeal of this law was desirable on general grounds of principle. The majority of the Assam Labour Enquiry Committee pronounced in favour of the repeal of the Act of 1859. They considered it an "anachronism" that there should be any penal contract at all, and that the repeal of the Act "so far from being detrimental to the tea industry would result in stimulating recruitment and the attraction of a better class of labour." ¹ The penal provisions of the Workmen's Breach of Contract Act were repealed in 1926. The Royal Commission on Indian Labour examined the various aspects of the recruitment of labour for the Assam tea gardens. In their opinion Act VI of 1901 which governed recruitment for Assam was unintelligible to most people owing to various changes introduced in the Act by notifications. Many of the provisions of the Act were of doubtful validity. But the Act disclosed very serious defects in that it hampered unduly the free flow of labour to Assam. The Act recognised recruitment only through the garden sardars but this system enormously enhanced the cost of recruitment. Further, another striking defect in the Act is that it does not permit any form of advertisement or propaganda in recruiting districts except by the sardar himself. Another anomaly of the existing law is that it renders illegal any assistance to emigrants except through a garden sardar who may not always be available.

The Commission therefore thought that the first necessity was the enactment of a new Emigration Act which should have the object of free movement of labour to Assam. Provisions are therefore to be made to facilitate the forwarding

to Assam of recruits who in the recruiting districts offer themselves for employment. The restrictions hitherto prevalent upon the recruitment of labour should be abolished but the Government should retain the power to re-introduce control if necessary. The Assam Labour Board had outgrown its usefulness and its abolition was recommended. In its place, the appointment of a Protector of Immigrants by the Government of India was advocated, "What is wanted," said the Commission, "is an effective authority working mainly in Assam and definitely charged with responsibility for the emigrant during his journey and after his arrival, and entrusted with adequate powers to protect his interests."¹ But the most vital right that was proposed to be conferred on the emigrant, was the right of repatriation at the end of three years at the expense of the employer. If the workers realise that they would have the chance of coming back to their village home without any cost on their part, the recruitment will undoubtedly be easier than before, and the employers in their return would attempt to make the condition of employment attractive in order to reduce the cost of repatriation.

Towards the end of the nineteenth century the industry passed through a period of severe depression due to over-production. There was a rapid expansion of the industry in India, Ceylon and Java * following upon an era of high prices and prosperity. In 1907 Mr. O'Malley writing about the future of the tea industry observed, "The natural expansion of the tea trade, the opening of new markets on the Continent and the steady supplanting of the Chinese article in the Australian, American and Russian markets have now resulted in the demand having overtaken the rate of production so that the prospects of the industry are distinctly favourable." The

advertisement of Indian tea in foreign countries is facilitated by the levy of a cess on exports under the Indian Tea Cess Act of 1903* which provides the necessary funds.

The increase in the acreage and production of tea in the current century will be seen from the following table :—

Year.	Area (acres).	Production.
Average		lbs.
1900-1904	524,720	201,888,009
1910	568,554	268,269,858
1915	634,940	372,202,074
1920	704,059	345,889,576
1925	728,812	368,506,571
1929	712,000	401,000,000

Of the total area under tea in India 82 p.c. lies in Assam and in the two contiguous districts (Darjeeling and Jalpaiguri) of Northern Bengal. The elevated region over the Malabar Coast in Southern India (including the State of Travancore and the districts of Malabar, Nilgiris and Coimbatore) contains 14 per cent. of the total. The total cultivated area is 33 p.c. of the total area of plantations showing that there is still considerable scope for its expansion should an increased demand for the product arise.

The industry has been mainly developed by foreign capital, but of late, Indians are showing an increasing interest in the investment of capital in this industry and in its management. The capital of joint-stock companies engaged in the industry during 1925 amounted to Rs. 43 crores or about £32 millions. Of this £24·7 millions or 32·9 crores

have been furnished by Companies incorporated in the United Kingdom and the remainder by Companies of Indian domicile.

Indian tea is mainly dependent upon foreign markets.

Exports of tea. During the last thirty years the exports from India increased 124 p.c. and those from Ceylon 91 p.c., but the exports from China declined 54 p.c. Java, whose exports compared with those in 1905-6 have increased 269 p.c., has become a formidable competitor of India. Of the total production of India which amounted to 363 million lbs. in 1925, 337·3 million lbs. were exported and the balance was left for home consumption. Of the export trade in tea the share of the United Kingdom is 86 per cent., America 4·5 p.c. and Asia 4·7 p.c. Before the war Russia was an important customer of Indian tea and exports to that country amounted to nearly 30 million lbs., but during the War India lost the Russian market and though trade has been resumed, the exports to that country are insignificant.¹ The value of the total export trade in tea though fluctuating is considerable as will be seen from the following table. The industry is thus the source of a continuous stream of wealth from foreign countries.¹

	Rs. in thousands		Rs. in thousands
	Rs.		Rs.
1900-01	9,55,09	1914-15	15,52,85
1905-6	8,84,76	1919-20	26,26,90
1910-11	12,41,63	1925-26	27,12,17
		1929-30	26,01,00

The production of coffee deserves attention next. The history of the introduction of coffee into India is very obscure. Dr. Watt says

Coffee.

¹ Indian Tea Statistics, 1926.

that "it was brought to Mysore some two centuries ago by a Mohammedan pilgrim named Baba Bûdan, who, on his return from Mecca, brought seven seeds with him. This tradition is so universally believed in, by the inhabitants of the greater part of South India, that there seems every chance of its being founded on fact."¹ But the industry did not make any progress in the eighteenth century. In Millburn's *Oriental Commerce* is given a statement of the "East Indies" coffee imported into England from 1802 to 1810 but this coffee was derived from Java, Bourbon and Ceylon. In 1823 we find a charter granted to Fort Gloster, Calcutta, authorising it to become a cotton mill, a coffee plantation and a rum distillery. About the same time botanical researches in this plant commenced in Calcutta, but the industry of coffee planting did not take a foothold in the plains. It migrated to the hills of Southern India and more specially of Mysore. In 1832 Dr. Wallich in his evidence before the Select Committee on Indian affairs stated that several plantations had been established by a number of mercantile houses as well as private individuals to the extent of about 4,000 acres.² The progress of this industry was not so marked as in the case of tea industry. Between 1832 to 1885 the area under coffee increased from 4,000 to 237,494 acres. During the next ten years the area increased to 274,000 acres. This increase was consequent upon a great demand that arose out of the failure of supply from Brazil where revolutions took place in 1889, 1891 and 1893. In the beginning of the current century a distinct tendency to decline has appeared. Thus in 1903 the area returned was 228,815 acres which fell to 127,000 acres in 1920.

¹ Watt, *Commercial Products of India*, p. 367.

² Royle, *Essay on the Productive Resources of India*, p. 185.

The production of coffee is confined mainly to Southern India. More than 50 p.c. of the area under coffee is in the Madras Presidency and the remainder is in Coorg.

By the middle of the 19th century coffee began to figure among the standard exports from India. In 1853-54 the export of coffee from India to the United Kingdom was valued at Rs. 4,75,980, and by the end of the century it reached nearly a crore of rupees. The development of the export trade may be seen from the following table.

		Value.
		Rs.
1901-02	...	1,25,02,200
1905-06	...	1,75,67,240
1910-11	...	1,83,15,930
1914-15	...	1,65,38,000
1919-20	...	1,71,39,000
1925-26	...	1,85,26,000

Another plantation industry, *viz.*, rubber deserves mention.

The production of rubber is confined to Southern India. Owing to the absence of industries using rubber almost the whole of the product is exported. In the beginning of the present century the export of rubber was a negligible quantity but it rose to 14 million lbs. in 1920-21. Since then the rapid fall in the price of rubber has hit the industry very much. The planters were compelled to reduce production under the Stevenson plan and though there was a slight recovery in 1925, the price of rubber has again tended to fall.

CHAPTER III

EXPERIMENTS AND ENCOURAGEMENT FOR THE PRODUCTION OF RAW MATERIALS

The study of the industrial development of a country requires, as a preliminary, a study of the raw materials upon which its industries depend. Where industries have been established with raw materials imported from foreign countries, there is the obvious danger that this supply is liable to be cut off when political relations are strained. These industries are called exotic for their foundation lies elsewhere. The bulk of the industries of Great Britain are exotic, their continuance being dependent upon an assured supply of raw materials from foreign countries and the colonies. India, however, stands on a different footing. The wide diversity of climate, soil and other physical factors, have made it possible for her to grow different kinds of raw materials in abundance for her industries, but it is remarkable that she has not been able to take full advantage of these materials. The importance of raw materials in determining the localisation of industries can hardly be overestimated. There was a time when the localisation of industries was influenced by the existence of skilled labour and accessibility to markets but that stage seems to be over. "The seat of manufacturing industry," as Carnegie says, "is now, and will continue to be more and more, simply a question where the requisite materials are found under suitable conditions. Capital and labour have lost the power they once had to attract raw materials; these now attract labour and capital."¹

¹ Carnegie, Rectorial Address at St. Andrew's, 1902, pp. 7-8.

Of the raw materials produced in India, the most important is cotton. It is an indigenous plant of India and is widely distributed throughout the country. Production was carried on in the beginning of the nineteenth century in small patches almost in every village. But there were certain tracts more adapted to its cultivation and growth than others. The province of Gujrat, the Deccan and the plain between the Ganges and the Jumna specialised in the production of cotton.

Cotton.

An extensive trade developed between these territories and Bengal and Madras. The weavers of Bengal depended on up-country cotton for seven-eighths of the quantity used in their various manufactures.¹ The average quantity of cotton imported annually into the provinces of Benares and Bengal was 450,000 maunds and the whole of the material was used by the weavers in the manufacture of piece goods.² The manufacturers of the Coromandel Coast depended on cotton imported from Nagpur. Dacca cotton, out of which her fine muslins were manufactured, was grown in a limited space of about forty miles in length, by less than three miles in breadth along the banks of the Meghna, about 20 miles north of the sea.³ This cotton was identified by John Bebb, Commercial Resident of Dacca, with the commercial variety known as Photie, the finest cotton then known in the world.⁴

The East India Company at first interested themselves in raw cotton to secure an adequate supply of it for their factories in Bengal and for export to China. Thus we find in 1788, the Court of Directors drawing the attention of the Government of India to the scarcity of suitable raw cotton

Company's interest
in cotton.

¹ Report on the Import and Export Trade of Calcutta by Sea, 1799-1800.

² Report on the Cotton Trade of India, 1809.

³ Report on the Culture and manufacture Cotton Wool in India, p. 360.

⁴ Letter from the Court of Directors to the Governor General in Council, 20th August, 1788.

as being responsible for the non-execution of some of their orders for cotton piece-goods. We also find an observation of the Reporter General of External Commerce emphasising that "as on the due supply of this article the most valuable manufacture of the Lower Provinces must in a great measure depend, it becomes an object of importance to ascertain the mode in which the supply can be most regularly obtained."¹

But the question of supplying suitable raw cotton to the local manufacturers became very soon unimportant. The great inventions which had taken place, and the improvements which had been effected in the various kinds of machinery for spinning and weaving, occasioned a constantly increasing demand for the raw material, and increased means of supplying it were consequently sought.

The British cotton industry in 1786 derived its supply of cotton from British West Indies, French and Spanish colonies, Portuguese colonies, Dutch colonies and Smyrna and Turkey. Neither India nor the U.S.A. did figure among the countries from which Great Britain imported raw cotton at the time. Cotton began to be imported into Great Britain from the United States in the nineties.

In 1788 in consequence of representations from British manufacturers, the Court of Directors sent orders to India for exportation to London 500,000 lbs. of the best Broach and Surat cotton or Bengal cotton of a similar quantity. The Government at Bombay, in pursuance of these orders, sent a consignment but it failed to meet the approbation of the British manufacturers.² Indian cotton fetched a price

British Manufacturers' interest in cotton.

¹ Proceedings of the East India Company relating to the Culture of Cotton, Silk and Tobacco.

² The Court of Directors remarked: "It is evident that notwithstanding the flattering allurements held out by the British manufacturers, the article will by no means answer. Letter to the Governor General in Council, dated the 30th May, 1792.

varying from $7\frac{1}{2}d.$ to $10\frac{1}{2}d.$ per lb. as contrasted with American cotton commanding $2s. 4d.$ per lb. It was complained that Indian cotton was of short staple and "dirty and foul." The Court emphasised the necessity of careful picking and ginning and for the latter operation sent out machines of American model to India. It is significant to note that the export of cotton from India to Great Britain though quite insignificant in 1794 and 1795 rose to 22,375 bales in 1799 but the greater portion of it was meant for re-export to the continent.

Increasing interest was, however, shown at this time by the officers of the East Indian Company in the subject of cotton. Attempts were made to increase the supply and to improve its quality by experiment with foreign seeds. The demand for an increased supply of cotton arose specially on account of China investment. It was proposed to increase the supply by a guarantee of a certain price and occasional advances to the cultivators and by encouragement to the merchants to store their cotton at particular towns.¹

In Madras the Commercial Residents were directed to procure seeds of superior indigenous varieties and encourage their culture on the coast. It was proposed that a fixed price of Rs. 80 per candy and a bounty for three years was to be paid on every candy brought clean and dry to the nearest Commercial Residency.²

With a view to improve the quality an experiment was undertaken at Rhaudaterra plantation with Burbon seeds.

The produce of this plantation fetched a price of $2s. 2d.$, but so great was the cost that the Court wrote in 1811 that "the experiments which have hitherto been made to cultivate Burbon Cotton in India have not been attended with much success."³

¹ Observations of the Reporter General of External Commerce, 1802.

² Proceedings of the Fort St. George Committee of Reform.

³ Letter from the Court of Directors, 27th November, 1811.

The export of Indian cotton to Great Britain during 1800 to 1808 was on an average 10,000 ^{American Embargo.} bales which rose to 35,000 in 1809 and 79,000 in 1810. This increased export was due to the American embargo in 1808 which interrupted the supply from that country. As a consequence of the American embargo, the Court of Directors at the instance of the British manufacturers looked to India for a liberal supply of cotton wool. In response to the instructions of the Court of Directors thirty million lbs. of cotton were sent on the Company's account but with the renewal of commercial intercourse with America in 1810 the Indian cotton became "a ruinous and unproductive burden" upon the Company and private importers. The Court consequently wrote that "it will not be consistent with commercial policy for us to persevere in the importation of Indian cotton wool into England if the British manufacturers continue to manifest so adverse a disposition to the use of it."¹ One important cause of the unpopularity of Indian cotton in the London market was its impurity and it was insisted that the cotton meant for export should be of the best quality and perfectly free from seeds and dirt. Further, if cotton of a quality equal to that of Burbon could be produced it might be expected to have a ready sale in the London market at the price of 2s. per lb.

In 1811 the Government in Bombay resumed efforts to improve the quality of Indian cotton by ^{Experiments with foreign seeds.} importing seeds from Burbon. These seeds were distributed among the Collectors at Surat and Broach to induce the raiyats to sow them, but no successful result was obtained. The Government, however, proposed that an experimental farm might be started under the direction of a competent person and if success was attained it

¹ Letter from the Court of Directors to the Governor in Council, Bombay, 20th August, 1810.

would induce the more enterprising inhabitants of Bombay and Salsette to undertake its cultivation.¹

Up to 1816, the experiments with Burbon seeds were unpromising as will be evident from an observation of the Court of Directors that "the want of success which has attended your endeavours to introduce the cultivation of cotton from Burbon seed is a matter of public loss."² In the same year, however, the cultivation of Burbon cotton within the Kaira district conducted experimentally by Mr. Gilder was attended with success. The product of 27 bighas amounted to 44½ maunds of clean cotton and on examination it was reported to be of excellent quality and fit for the European market. A satisfactory report was also received from Mr. Hall, of an experiment made in the cultivation of the same cotton at Malwa. The specimen of this cotton sent to the London market was reported to be of satisfactory quality³ and it was considered desirable by the Court of Directors that the experiment should be prosecuted further. It was, however, insisted that when people were fully acquainted with the mode of producing this and with all the advantages to be derived from it, they should be left to themselves. Though these experiments were reported to be successful there is nothing on the record to show that the cultivation of Burbon cotton was undertaken by the farmers on a commercial scale. It was, however, alleged that the cultivation of this cotton was checked by the difficulty of finding a market for long silky cotton.⁴

In Bengal experiments were conducted at Lady Hastings' farm near Barrackpore with Barbadoes seed and the cotton

¹ Letter from Governor in Council at Bombay to the Court of Directors, 30th May, 1812.

² Letter of the Court of Directors, 8rd January, 1817.

³ Letter from the Court of Directors to Governor in Council, Bombay, 27th November, 1818.

⁴ *Ibid.*, dated 18th February, 1820.

from this seed sent to London was reported to be satisfactory. In the Upper Provinces Assistant Surgeon Henderson made experiments with Bourbon and some species of American cotton but no tangible result was realised from these experiments.

In 1828 there was a renewal of interest in Indian cotton.

^{Renewed interest in 1828.} The Committee of the Privy Council for trade drew the attention of the Commis-

sioners for the Affairs of India to the possibility of improving the culture in the East Indies of some articles which were chiefly supplied by the United States of America particularly cotton and tobacco. It was contended that the cotton of India was inferior to that of America not through any inferiority in the soil in which it was grown but through a defective mode of cultivation. The Committee proposed that facilities should be extended to British subjects who might be disposed to settle in the cotton districts as in the case of indigo. The Home Government also proposed at this time to encourage the importation of Indian cotton by a reduction in the import duty from 6 p.c. to a fixed rate of 4*l.* per cwt. which would mean 1*s.* 2*d.* on Indian cotton as contrasted with 12*s.* on American cotton.

The Court of Directors was thus again influenced to take up the question of cultivation of Indian cotton. In their letter to the Governor in Council, Bombay, they wrote "the course of public affairs, at the present time, has caused us to direct our attention in an especial manner on this subject, and to look to India for the means of rendering Great Britain independent of foreign countries for a considerable portion of a raw material, upon which her most valuable manufacture depends."¹ It was also pointed out in the same letter that an improvement in Indian cotton

¹ Letter from the Court of Directors to the Governor in Council, Bombay, dated the 18th February, 1829.

would add to the agricultural resources of the country and at the same time would facilitate "the remittance of the annually increasing political and commercial debt, for which India becomes liable to the mother country." Surat cotton was at this time finding a ready market in Great Britain and its quality was not inferior to certain varieties of American cotton. It was therefore proposed by the Court that an experimental plantation should be established at the expense of the State with the object of cultivating cotton from the seed of the best indigenous plants of India and also from American seeds. Further, for the purpose of cleaning and ginning, a new machine called Whitney's Saw-gin was sent to India.

In 1829 Henry Tucker submitted a memorandum to the Court of Directors "on the supply of cotton from British India."¹ In that Memorandum he emphasised that it was highly expedient as "a national object" to encourage and promote in British India, the cultivation of those varieties of cotton which were most useful in extending and improving the manufactures of Great Britain. He recommended the following measures for the improvement of cotton cultivation in India :

(1) That two or more plantations on a large scale should be established for ascertaining experimentally the best system of husbandry applicable to the growth of cotton and the varieties of plant which could be cultivated with the greatest advantage in the soil and climate of British India.

(2) That persons acquainted with the mode of cultivating cotton in America should be brought to India.

(3) That the Government of India should be authorised to grant to such British subjects such quantity of unoccupied

¹ Proceedings of the East India Company in regard to the Production of cotton wool, p. 152.

land as might be judged necessary for the establishment of cotton plantations.

(4) That the Government of India should be authorised to offer annual prizes for the production of the best cotton.

(5) That the Government of India should be instructed generally to afford every possible encouragement to promote the trade in cotton by freeing it from all duties and customs.

It will thus be manifest that another great stimulus to cotton improvements in India was given, and experiments in accordance with the Court's suggestion were undertaken. Farms were established at Gujerat and Dharwar under expert European supervision. The superintendents of these farms stated that the cultivation of the cotton plant depended more upon the season than upon the skill of the cultivator. It appeared to them, however, that improvement might be looked for from a better mode of gathering the *kapas* than from any alteration that would be introduced in the cultivation.¹ At this time however American Upland cotton was grown at a farm in the district of Dharwar and was favourably received by the merchants of Bombay.

In the Presidency of Madras American seeds were introduced in 1831. The seeds were distributed and sown in different parts of the country but these experiments proved a failure. The Collector of Cuddapah wrote in 1833 : " It is not, however, to be expected that the American will ever supersede the country cotton as the latter plants require no watering and being annual are cultivated in unenclosed fields."²

In 1835 experiments were commenced with Egyptian seeds in the Bombay Presidency but these experiments also met with no better results. In 1836 Mr. Barber who was then Collector of Dhárwar wrote : " Though the experiments

¹ Letter from the Governor in Council in Bombay to the Court of Directors, 5th October, 1833.

² Letter from Mr. H. Lacon, 30th March, 1833.

had gone on for five years not a single landholder had in the slightest degree changed his mode of cotton tillage, of gathering the crop and of preparing it for the market.”¹

In 1838 several commercial bodies in Great Britain again urged the adoption of suitable measures for the improvement of Indian cotton. In accordance with the suggestion of Mr. Tucker four American planters were brought into the country in 1840. But even with the efforts of the American planters no success was attained in the cultivation of foreign cotton in India. “Trials of exotics carried out about this time both by officials and non-officials all over Gujerat, the Deccan and Konkan were no more fruitful in results.”²

In the district of Dharwar, however, experiments with New Orleans seeds carried on by Mr. Shaw were attended with a certain measure of success. The present Dharwar-American cotton is the only survival of the numerous experiments carried on with exotic varieties and by 1861-62 the area under it reached 178,628 acres. This variety commanded a higher price than the indigenous variety of Kumpta and the difference in its favour varied from 1d. to 1½d. per lb.

The preservation of the purity of the Dharwar-American cotton was attended with great difficulty owing to adulteration and admixture with indigenous cotton. The raiyats complained that they were supplied with mixed seeds from gins and the result was a mixed crop. In 1863 the Government of Bombay passed an Act known as the Cotton Frauds Act which in addition to prescribing penalties for fraudulent

¹ Bombay District Gazetteer, Vol. XXII, p. 287.

² Report of the Indian Cotton Committee, p. 100.

adulteration and deterioration of cotton and the fraudulent sale or offer for sale of adulterated or deteriorated cotton also prescribed a penalty for the offer of adulterated cotton for pressing. The Act, however, failed to stop adulteration with the result that it was repealed in 1881.

During 1860-1900 there were desultory experiments with hardly any success and in 1897-98 Mr. Mollison came to the conclusion "that exotic varieties of cotton were unsuited to the conditions of Indian agriculture, that an indigenous variety found suitable in one district might prove unsuitable to another and that the only hope of improvement lay in taking the varieties that were found in general cultivation and in trying to improve them by selection of seed carried from year to year."¹

During the second half of the nineteenth century there was a progressive increase in the area and
Expansion in the cultivation of cotton. outturn of raw cotton. This was mainly due to the stimulus of demand. The development of the cotton mill industry in the continent, Japan and India caused a great demand for Indian cotton. The opening of the Suez canal in 1869, has also been another contributing factor which by reducing freight supplied an incentive to the export trade. During the American civil war when Lancashire was faced with a serious cotton famine exports from India greatly increased. The price of cotton rose phenomenally high and the exporters and growers all shared in the cotton boom.

In 1864-65 there was an area of 6 million acres under this crop.² By 1891-92 it rose to nearly 9 million acres.

¹ Report of the Indian Cotton Committee, p. 101.

² Report of the Moral and Material Progress of India, 1864-65, p. 63.

The following figures show the rapid increase in the production of this material and its export in recent years :

Year.	Area, million acres.	* Outturn, million bales.	Export, value Rs. '000
1900-01	14.2	8.1	10,12,74
1905-06	21	4.1	21,84,15
1910-11	22.5	4.3	86,05,55
1915-16	17.7	8.7	24,97,01
1920-21	21.3	8.6	41,07,61
1925-26	28.4	6.2	95,25,50

It will be apparent from the above table that both the area and the outturn of this crop doubled in the course of a quarter of a century, and the value of the export rose more than four times. The enormous increase in the value of the export in 1925-26 was due to a very high price brought about by the shortage of the American crop.

The Botanical research is now-a-days concentrated upon the growth of suitable strains from the indigenous varieties by a process of selection of seeds with a view to increase the yield as well as to improve the quality. The average yield per acre of the Indian crop is only about 98 lbs. of lint whilst that of the United States crop is nearly 200 lbs. and of the Egyptian crop 450 lbs.¹ As to staple the bulk of the Indian crop is less than $\frac{3}{4}$ " with which yarns up to 25's can be spun. In 1915-16 it was ascertained that the mills in India used 59 million pounds of the local crop for spinning counts 26-40 and 1.9 million pounds for counts above 40 as contrasted with 660.6 million pounds for counts 1-25.² It has been repeatedly urged by manufacturers in India that it

¹ Report of the Indian Industrial Commission, p. 68.

² Appendix B to the Report of the Indian Industrial Commission, p. 24.

is of greater importance to them than to manufacturers elsewhere that sufficient cotton of long staple should be forthcoming.¹ Steps are now being taken to evolve suitable varieties by the process of hybridisation. In the United Provinces Mr. Leake's experiments were directed towards this end. In the Punjab as a result of this kind of efforts a new variety has been evolved in the canal colonies, with which yarns of higher counts can be spun.

The appointment of a permanent Indian Central Cotton Committee for the purpose of research has been a step in the right direction. The report of the Committee for 1928-29 points out the success that has attended their endeavours in the production of two superior cottons in sufficient quantities conferring considerable benefit upon the mill industry. The demand for the seed of these new varieties has outrun the supply and the Committee have wisely decided to help the spread of these and other improved varieties. The Committee anticipate that within five years or less the whole of the Central Provinces and Berar and Khandesh will produce nothing but the improved varieties. In the Punjab the Committee's Botanist has evolved a type of cotton which is a distinct improvement on the variety at present being grown. The Committee have also undertaken schemes to fight diseases of cotton that take a heavy toll of the cultivators' crop. They observe further that "although much had been done in the past by Provincial Departments of Agriculture to improve the quality and yield of Indian cotton, they feel that much more remains to be done."¹

The next important fibre crop is jute. It is an indigenous plant of Bengal. Its industrial use was known to the people of this province before it became a product of European commerce.

¹ Report of the Central Cotton Committee, 1928-29.

In the first quarter of the nineteenth century the spinning and weaving of jute were extensively practised by the people of Bengal for cordage and cloth for bedding, screens and garments of the poorer classes and many other domestic purposes.¹ Its cultivation was spread all over Bengal but it flourished best in the swampy tracts of Eastern and Northern Bengal.

Among the botanical writers Dr. Buchanan was the first to study the habitat of this plant and the nature of its fibre. In the course of an investigation to find out a cheap substitute for the Russian hemp or flax for the sails, ropes and cordage of the ships of the East India Company, he was doubtful of the utility of jute fibre for the above purposes. "Whether or not this plant might be employed to make cordage or canvas, I cannot say, but I hope that no circumstance will divert the attention of the public until a fair trial has been made of San (Indian hemp)." ²

As an article of European commerce it occurs in 1793 when the Company's officers sent to England 100 tons of this fibre under the name of 'pat.' ³ From 1804 the exports gradually increased but the shipments were generally so insignificant that no separate accounts of such exports were kept in the Customs House.

About a century back the fibre was held so low in the estimation of the commercial public that the "Dundee flax and hemp spinners used to guarantee their products 'free of Indian jute.'" ⁴ In the year 1829 a separate head was assigned to it in the Customs House records when it came up to 364 cwt. The development of international trade opened out a great possibility for the utilisation of this fibre.

¹ Wallace, *Romance of Jute*, p. 1.

² *Imperial Gazetteer*, Vol. III, p. 204.

³ Report on Jute by Hemchandra Kerr.

⁴ Watt, *Commercial Products of India*.

For packing cotton, sugar, wheat and other articles of trade an extensive demand arose for Indian jute. The establishment of the Dundee jute industry about the year 1838 opened a great future for this fibre.

In 1850-51 the value of jute to India as represented by the export of raw and manufactured material was a little over 41 lakhs of rupees. Since then there has been a progressive increase in the quantity and value of this material exported to foreign countries. Thus in 1900 the value of jute both raw and manufactured was 18 crores only which rose to 86·8 crores in 1925-26.

In 1872 it was estimated that there were about one million acres under this crop which rose to 2 million acres towards the close of the century. Both the area and outturn of the crop are subject to considerable variations. The causes of the variations are partly physical and partly economic. Lack of timely rains reduces the area and outturn largely. But the outturn is also affected by the range of price realised for the product. As jute lands can be sown with rice a reduction in the price of jute leads to the substitution of rice. Thus in 1915-16 and in 1920-21 the low price of jute brought down the area from 3·1 million acres to 2·3 million. The following table reveals the variation in the area and outturn of this crop in recent years.

Year.	Area (million acres).	Outturn (million bales of 400 lbs.).
1900-01	2	6·5
1905-06	3·1	8·14
1910-11	2·9	7·93
1915-16	2·3	7·8
1920-21	2·5	5·9
1925-26	3·1	8·9

The quantity and the value of the export of raw jute shows considerable variation on account of fluctuations in demand. Owing to the development of the local manufacturing industry the proportion of the export is diminishing gradually. The trend of the trade in raw jute will be realised from the following table. During the last war there was a big drop in the export of raw jute owing to freight difficulties and the closure of the continental markets but after the war there has been a recovery of the trade.

Year.	Outturn (lakhs of bales).	Mill consumption (lakhs of bales).	Export (lakhs of bales).	Value of Export (crores) Rs.
1912-13	98	46	50	27.05
1913-14	89	45	43	30
1914-15	104	49	80	12.9
1917-18	89	54	18	6.45
1921-22	10	44	30	14.04
1924-25	80	57	39	29.09

The subject of jute cultivation in Bengal attracted the attention of Government in 1870. It was urged at that time by the Bengal Chamber of Commerce that jute had considerably deteriorated and steps might be taken by Government to improve the quality and yield and increase the area under cultivation. A Committee was appointed by Government to investigate into the matter and Mr. Hemchandra Kerr, a member of the Committee, reported that the area under this crop might be increased without restricting the supply of food-stuffs. With regard to the complaint of deterioration of the fibre he remarked, "I believe I am justified in inferring that in proportion to the increase of cultivation the

quantity of medium and inferior jute has been greater season after season " but he did not make any concrete suggestions for the improvement of the fibre.

In 1887-88 the attention of Dr. Watt was directed to the question of deterioration of jute fibre. As a botanist he thought that the alleged deterioration might be due either to (a) the substitution of a prolific, though poor stock plant or (b) exhaustion of soil. He collected various specimens of the plant but did not proceed further in his experiments.

In 1900 the question of the deterioration of the jute fibre again came into prominence. The Bengal Experiments in jute.

Chamber of Commerce insisted on the appointment of a Committee to enquire into the agricultural aspect of the industry. This Committee recommended that investigation should be undertaken to ascertain the means by which improved fibre might be placed on the market at a reasonable price both for the benefit of the trade as well as for the benefit of the cultivators. Experimental farms were established at the instance of the Committee to isolate the varieties which would produce a heavier yield and an improved fibre. In the course of these experiments it was discovered that a variety called Kakya Bombai was suited to the conditions of Eastern Bengal. The superiority of this variety was such that its yield exceeded that of the local race by about three maunds per acre. The seeds of this variety are so much in request, that the Fibre Expert of Bengal observed " that the progeny of a single plant of Kakya Bombai is now cultivated over about 200,000 acres in Bengal, Assam and Bihar."¹

The success of the Bengal Jute industry induced many countries to attempt the production of it. Jute was tried by America, Africa, Algeria and Formosa but with indifferent results. Attempts have also been made now and then

Attempted production in foreign countries and jute substitutes.

¹ Finlow, Note on Experiment with Jute in Bengal, 1925.

to find suitable substitutes for this fibre. During the last war in view of the scarcity of jute and hemp for industrial purposes, the manufacturers of Germany directed their investigations to discover some practical substitutes for this fibre. It was alleged that they were successful in finding out a substitute for jute. The material discovered by them was a textilose made from paper pulp and spun into thread or cord preparatory to being woven into a tough cloth. It was believed that that the material had great powers of resistance and apart from the fact that the finished textilose sacks must cost considerably more than jute sacks, it was in every way a creditable substitute for the Bengal natural fibre.¹ There was another report in 1913 that "A new departure in the jute trade is the receipt in this country of the first sample of jute grown in Sudan resulting from an experimental trial at Kodak in the Upper Nile Province."² Experiments have been conducted in Cuba for several years with the idea of utilising the Malva fibres and the process of extraction was elaborated on a basis that made the extraction a commercial possibility.³ During the war the price of jute rose so much that the plant Malva was thought to be of considerable promise. In spite of these threatened substitutes, the jute fibre is holding the field in the world's market and the reason for it is its low cost in comparison with other fibres.

The Agricultural Commission recommended the establishment of a Jute Committee in Bengal to co-ordinate and direct all research activities in respect of jute. Should this Committee undertake the various tasks as we have found in the case of Central Cotton Committee a great future awaits the industry.⁴

¹ *Statesman*, 25th August, 1916.

² *Ibid*, 9th September, 1913.

³ Report of the Jute Mills Association, 1916, p. 188.

⁴ A Central Jute Committee has recently been appointed to deal with the various aspects of the jute industry.

Another important raw material is sugar-cane. India has the largest area under this crop but her imports in recent years have grown with very great rapidity. The statistics of sugar production of the world reveal the most striking fact that in India the production of sugar per acre is extraordinarily low in comparison with other cane-growing countries. The average outturn of sugar in India during the five years ending 1918-19 has been 1·07 tons per acre as contrasted against 1·96 tons in Cuba, 4·12 tons in Java and 4·61 tons in Hawaii.¹ The position of India is really much worse than these figures indicate, for the Indian figure is in terms of *gur* (raw sugar) whereas the figures of other countries are in terms of refined sugar. The production of Indian sugar has fluctuated between two and three million tons during 1910-20 and internal production was supplemented by imports which averaged during the pre-war period 700,000 tons. The greater proportion of these imports was contributed by Java. The other sources of supply are Mauritius, Austria and Germany, and these two latter countries export beet sugar.

India has on an average $2\frac{1}{2}$ million acres under this crop.

Area. Compared with 1891-92 there has been a reduction of half a million acres under this crop. During 1900-20 the area under it appears to be stationary. Of the total cane acreage 75 p.c. are provided by the three main provinces of Upper India, *viz.*, the United Provinces, the Punjab and Bihar and Orissa. The United Provinces contribute 48·9 p.c., the Punjab 15·4 p.c. and Bihar and Orissa 9·8 p.c. In Bengal and Assam the area under cane crop during 1904 to 1914-15 declined from 680,380 acres to 521,000 acres, and one important reason for the decline was the replacement of cane area by jute.

¹ Report of the Indian Sugar Committee, p. 7.

During this period the price of jute rose 61 p.c. whereas the price of *gur* rose only 18 p.c. The area under cane declined by 23 p.c. and that under jute rose 22 p.c.¹ It will thus appear that the future acreage under cane will depend not merely upon the price of *gur* but also upon the prices of other crops which can favourably compete with it in profitable production.

During the nineteenth century no attempts were made to improve the condition of sugar-cane cultivation in India. It was towards the close of this century when the importation of bounty-fed beet sugar from Germany and Austria rendered the cultivation of sugar-cane precarious and unprofitable, that the industry received public attention. The menace to the Indian industry was, however, met by the imposition of a countervailing import duty on bounty-fed sugar, but the question of decline involved wider issues than cheap imports. Phenomenal advance took place in new and undeveloped countries in this industry but the Indian industry was in a moribund condition. It was therefore considered imperative that if the decline of the industry was to be arrested systematic experiments must be undertaken to ascertain its protentiality.

After the creation of the Department of Agriculture, the problem of cane cultivation was taken in hand and experimental farms were established at Shahjahanpur in the United Provinces and at Manjri in the Bombay Presidency. The task of the investigators was concentrated upon the botanical aspect of cane produced in different countries, and it was ascertained beyond doubt that the superior type of cane produced in other countries largely accounted for the higher outturn. The superiority of Java cane in comparison with

Experiments in
Sugar-cane.

the Indian was demonstrated in these experimental farms as will be manifest from the following figures.¹

	Java.	Shahjahanpur.	Manjri
Yield of cane per acre	1,113 maunds	888	1,069
Cost of cane: annas per maund)	4.75	5.78	5.70

Thus, it will appear from the above figures that even when cane is produced under most favourable conditions with heavy manuring, careful supervision and plenty of water, the outturn is considerably less than that of Java. In Upper India the yield of sugar cane per acre does not usually exceed 10 tons or 270 maunds per acre and it is therefore not difficult to see why the Indian industry is being driven to the walls.

The obstacles in the way of increasing local production lie mainly in the poor type of cane and the inferior cultural methods in the principal cane areas. At Shahjahanpur Mr. Clark by deep tillage and an ample supply of water by irrigation has successfully grown exotic varieties of cane. The average yield at Shahjahanpur with nine selected varieties was 30.8 tons of cane per acre. This was estimated by Mr. Clark to represent a yield of 100 maunds or 3.7 tons of *gur* per acre.² The work done in Bihar has so far been almost confined to varietal tests but a suitable quantity of the variety known as O.1135 has been distributed to planters. Varietal tests at the Imperial Research Institute at Pusa are in progress. In the Punjab Dr. Barnes, in the course of an examination of the existing varieties of cane cultivated in the province, discovered varieties which have the power of resisting frost. In Bengal experiments have been in progress to establish the suitability, for distribution,

¹ Report of the Indian Sugar Committee, p. 27.

² Report of the Sugar Committee, p. 216.

of the Mauritius variety known as Yellow Tanna. In Assam the varietal tests have established the superiority of striped Mauritius over the local varieties in respect of their suitability to local conditions. In Madras Red Mauritius is the principal cane grown although Fiji B is spreading as a result of the work of the East India distilleries. In Bombay through the efforts of the Manjri farm, an unknown variety introduced by the Agricultural Department and called by it Manjar is increasing in popularity.

The work of acclimatisation of an exotic variety is a tiresome process and it will take years before the results can be fully tested.

Improvement in
agricultural methods.

But the problem of cane cultivation depends on other factors as well. As the Sugar Committee points out, "If the urgent demand for increased food production is to be met and the full benefit of extensions of irrigation is to be realised, it is essential that a supply of fertilisers should be available at reasonable prices."¹ The Indian Industrial Commission while endorsing the continuance of the present policy of improvement, emphasised that the growers of the Northern tract should be encouraged to apply fertilisers on a sufficient scale to their lands.²

Oil-seeds are important raw materials upon which many industries have been built up in Western countries. India has a large area devoted

Oil-seeds.

to the production of oil-seeds and this area is growing in response to foreign demand. In 1901-02 the total area under oil-seeds was 12,962,000 acres and in 1925-26 it rose to 15,156,819 acres.

The different varieties of oil-seeds grown in India are castor, copra, cotton, groundnut, linseed, rape and mustard and sesamum. Of these the most important are rape and

¹ Report of the Sugar Committee, p. 216.

² Appendix B. to the Report of the Industrial Commission, p. 48.

mustard, linseed, groundnut and sesamum. The acreage and the yield of these will be seen from the following figures :

1925-26.	Area (million acres).	Yield (tons).
Linseed	3.5	401,000
Rape and Mustard	5.6	910,000
Sesamum	4.9	420,000
Groundnut	3.9	1,999,000

A very large proportion of the produce is exported and much of the balance is crushed either by small power plants or country bullock mills, the latter of which are very inefficient in oil extraction. The exports of non-essential oil-seeds from India for the five pre-war years averaged 1,432,607 tons annually valued at 24 crores of rupees, and for the five years ending 1918-19 averaged 699,255 tons valued at nearly 12 crores. The export trade in seeds has however recovered and in 1925-26 the quantity exported rose to 1,249,538 tons and the value to 29.63 crores of rupees. The figures are sufficient to indicate both the extent of the loss which India suffers by the export of a by-product of great manurial value which should be returned to the land, and the possibilities of an extension of oil-pressing industry which would enable the oil-cake to be retained in the country.

A large portion of the oil-seeds of commerce is employed for the extraction of oil or fat which is refined for use for the edible fat industry.

Industrial uses of oil-seeds.

Oils such as those of rape seed and linseed can now be so efficiently refined as to be employed in the manufacture of margarine. Cotton-seed and other oils can now also be converted into solid fats by the process of

hydrogenation, thus adding to the world's resources of solid fats for edible purposes.¹ In the manufacture of soaps, oils and fats are essential raw materials. Large quantities of oils and fats are also used as lubricants and in this connection it may be observed that castor oil is regarded as a lubricant par excellence and for which there is an insatiable demand. The paint and varnish industries depend on a supply of drying oils such as those of linseed and poppy seed. Thus, whether for edible fat or for industrial use the Western manufacturing countries would look to India for a regular supply of different kinds of oil-seeds.

India's position as a contributor to world's supply of oil-seeds may be seen from the following figures :

	World's exportable surplus in 1918.	Indian exports.	Proportion of India's share.
Copra	537,000 (tons)	38,000 (tons)	7 p.c.
Mowra seed	Not available	33,000 „	100 „
Cotton seed	900,000 (tons)	284,000 „	31 „
Sesamum	264,000 „	112,000 „	42 „
Castor seed	137,000 „	135,000 „	98 „
Rape seed	385,000 „	248,000 „	65 „
Groundnut	780,000 „	883,500 „	45 „
Linseed	2,150,000 „	418,000 „	20 „
Poppy seed	25,000 „	19,000 „	76 „
Niger seed	Not available	4,000 „	100 „

From the above figures it will be apparent that India has a virtual monopoly in the cases of mowra seed, castor

¹ Report on Oil-seeds, p. 4.

seed and niger seed and contributes a substantial portion of rape seed, sesamum and groundnut.

Roughly it may be said that 33 p.c. of the total production of oil-seeds in India are exported whereas the export of oil is a fraction of the seeds. It is thus to the interests of India's economy that these valuable raw materials should be retained in the country and the export trade should be in oils rather than in seeds.

The importance of oil-seeds to the Indian agriculturists as also to the world's trade has necessitated a detailed investigation into the potentiality of their development. The experiments with the linseed crop at the Agricultural Research Institute at Pusa have resulted in the isolation of different types of which at least three have yielded better results than the mixtures at present grown in the plains. Similar attempts are being made in the United Provinces for isolating pure strains of castor seeds and of studying their oil contents. Spanish groundnut has been introduced in Bombay and as a result the area under this crop in one district in Bombay rose from 4,100 to 106,044 acres in a decade. This variety matures early and can be grown without irrigation.¹

Tobacco is said to have been introduced into this country during the reign of Akbar in the sixteenth century, and its cultivation rapidly spread over the entire continent. At the present day, every district grows more or less tobacco, and besides the fields on which the marketable tobacco is cultivated, every village has its particular patches of land where tobacco is grown as a garden crop, along with the cultivator's vegetables. But the crop grown in the country is markedly inferior to that produced in America, and though it satisfies local taste

to a considerable degree it is unsuitable for the purpose of export.

In 1786 the attention of the East India Company was drawn by one Mr. Robert Kyd to improve the quality of tobacco produced in the country and fit it for export to the European market. The earliest experiment of some importance was made under the orders of the Court of Directors in 1829 when some Maryland and Virginia seeds were sent out to India and the tobacco grown from these seeds failed to satisfy the London market.¹

For nearly forty years after this, little was done to improve Indian tobacco. Attempts were renewed in 1870 in Madras where the experimental cultivation of tobacco was conducted by Mr. Broughton at the Saidapet farm. Samples of seeds were obtained from the various tobacco-growing districts but the experiment proved a failure on account of the unsuitability of soil. In Bombay, experiments were made about the same time with Persian seeds by Mr. Robertson and in one place these seeds produced tobacco of a quality which was pronounced satisfactory, but these experiments were not a commercial success.

The growing increase of imported manufactured tobacco raised the question of tobacco for cigars and cigarettes. The Department of Agriculture in their Research Institute at Pusa has in recent years undertaken fresh experiments in tobacco-growing. The aim of the Agricultural Department is to increase the outturn of better quality Indian cigars through selection of leaf and to produce a variety of tobacco suitable for the manufacture of cigarettes in India. As a result of their efforts, the Pusa Selection 28, a tobacco of light colour and

¹ Papers relating to tobacco culture.

good texture and suitable for cigarette-making, continues to find favour among cultivators in Bihar, Madras and Burma. The Bengal Department of Agriculture maintains a special farm in the district of Rungpore where the problem of tobacco improvement from various sides is receiving attention. The reputation of the Sumatra leaf, grown on the farm as a cigar-wrapper, has been established. Several exotic varieties such as Pennsylvania Board, Manilla No. 2, Ohio, White Barley and Orinoco are under trial for their suitability for cigar-making.¹

Indian industries are now, and will in future be, chiefly based on the agricultural products of the country, and the value of these experiments cannot therefore be overestimated. Though rich results have been obtained in many directions, there is still great room for a closer investigation into the industrial crops of the country to demonstrate their suitability for new industries.

CHAPTER IV

GROWTH OF MODERN INDUSTRIES : MINING AND METALLURGY

In a previous chapter we have noticed the decline of the handicrafts of India and its consequence, *viz.*, the progressive ruralisation of the country. This tendency to ruralisation was however slightly counteracted by the growth of the modern industrial system in the latter half of the nineteenth century. The displacement of labour consequent on the decline of indigenous industries was indeed slow, but the process of absorption in new industries has been slower still.

Industrial Revolution hinged on mineral industries.

India is still in the transitional stage. In Great Britain during a period of seventy years (1760-1830) the industrial life of the country was revolutionised. The Industrial Revolution shifted the economic centre of gravity from agriculture to industry. It brought about fundamental changes in the organisation and technique of industries in that country. The essence of these changes was the application of mechanical power to the methods of production. In a word, it was the supremacy of steam power that secured industrial leadership for England. Since the beginning of the Industrial Revolution material wealth has increased in manifold ways, mass production has been encouraged and industrial centres have been redistributed to avail of the advantages of new resources.

About the middle of the nineteenth century the British industries were ahead of the industries of all other nations. Great Britain produced two-thirds of the world's coal, iron and steel, cotton and woollen goods. This undisputed supremacy

in production was due to the fact that England possessed ample resources in the shape of coal, iron and steel. Other European countries having realised the potentiality of coal and iron began to exploit these natural resources and gradually adapted their methods of production to those of England. The phenomenal economic development of Germany after the Franco-Russian War might be traced to the same cause. Prof. Keynes remarked that the German Empire was built upon coal and iron rather than upon blood and iron.¹

India though situated far away from the Western countries could not remain aloof from the influence of the modern methods of production. Far-sighted individuals realised that the natural resources of India awaited exploitation by the aid of the scientific methods of the West.

In the present chapter we will study the various attempts made to develop the mineral resources of the country. Mining in India was carried on a limited scale even before the advent of the British rule in the country.

Indigenous Iron and Steel industry.

The art of smelting iron and the manufacture of steel were known to India from very early times. Large ancient heaps of slag in various parts of India—at Salem and Hyderabad in the South, in Orissa and the Central and North Western Provinces, proved that the use of iron was common in India from 2000 B. C. to 400 B. C. and considerable operations were carried on down to about 1400 A. D.² There would seem to be no doubt that the existing manufacture of wrought iron by a direct process was widespread in the country before the date of the most ancient historic records, while the manufacture of ancient wootz anticipated by many centuries the cementation process developed in Europe for the manufacture of the finest qualities of steel.³ According to Mr. Syed Ali

¹ Chapham, *Economic Development of France and Germany*, p. 284.

² C. B. Chartes, *Address before the Rotary Club*.

³ Watt, *Commercial Products of India*, p. 692.

Belgrami, the Nizam's dominions furnished the material from which the famous Damascus blades of the middle ages were made. The Damascene steel was exported from India for centuries *vid* Damascus or Persia. The antiquity of India's knowledge in iron may be judged from the famous pillar at Kutub near Delhi, from the hammered and perforated door panels both in iron and brass to be seen at the ancient palaces and tombs and the collection of arms, also cannons at Tanjore and Visnupur. About the Kutub pillar the opinion of Mr. Ball deserves to be quoted: "It indicates an amount of skill in the manipulation of a large mass of wrought iron which has been the marvel of all who have endeavoured to account for it. It is not many years since the production of such a pillar would have been an impossibility in the largest foundries in the world, and even now there are comparatively few where a similar mass of metal could be turned out. We have in this pillar therefore, which, though it has always been exposed to the atmosphere, shows no sign of rust, the most complete testimony of the skill and art of the Indian iron makers 1,500 years ago."¹ Forged iron bars of large size have been found also in temples of considerable antiquity in many parts of India but specially in the South and enormous cannons used to be made in Assam. The existence of iron in the districts of Balasore and Beerbhum seems to have been known at the earliest period of British rule in the country. Thus we find an extract recorded by Captain Alexander Hamilton: "In two days I travelled from Badruc to Balasore and saw nothing in the way but things common and indifferent, the products of the country being corn, cloth, iron, anise and cum-in-seeds, oil and bees' wax. Iron is so plentiful, that they cast anchors for ships in moulds, but they are not so good as those made in

¹ Ball, *Economic Geology of India*, pp. 363-69.

Europe."¹ The demand for iron for domestic use rendered it necessary to exploit the ores available in the country. The primitive iron-smiths found no difficulty in obtaining sufficient supplies of ore from local deposits as there is hardly a district away from the great alluvial tracts of the Indus, Ganges and Brahmaputra in which slag heaps were not found.² The smelting of iron in India was concentrated in localities where sufficient fuel was available near at hand. The localisation of the iron industry in England was determined by the same consideration in the sixteenth and seventeenth centuries. It is just when restrictions were imposed upon indiscriminate cutting of forests that the industry took a new turn. The potentiality of coal as a suitable fuel for smelting was recognised for many centuries, but it was the successful conversion of coal into coke by the Darbys in their works at Coalbrookdale in 1709, that laid the foundation of the modern iron industry. The production of iron under the new method was so economical that England began to turn to foreign markets for the disposal of the products of her mines.

In the early trade of the East India Company we notice metals forming an important part of their imported merchandise. The wasteful and uneconomical methods pursued by the Indian smelters placed them at a great disadvantage in comparison with the products of European origin. The effects of foreign competition upon the smelting industry have been the gradual abandonment of the industry to the point of extinction. "In times," writes Mr. Dobbs, "when supplies of iron could not be drawn from Europe, this metal was obtained in the North from the hills in the Kumaon Division and in the South from Lalitpur, Mirzapore and Central

¹ Captain Alexander Hamilton, *Account of a Voyage to the East Indies*, Vol. I, p. 305.

² *Review of the Mineral Production of India, 1910-23*, p. 180.

India. The smelting industry still survives precariously in both the North and South of the Provinces but it is rapidly dying out in its primitive form."¹ "The manufacture of iron has in many parts of India," says Mr. Ball, "been wholly crushed out of existence by competition with English iron, while in others it is steadily decreasing and it seemed destined ultimately to become extinct."² The necessity of curtailing the indiscriminate cutting of forests, the readiness with which a large variety of foreign implements can be obtained in the bazars and the higher wages obtainable in other industries have all combined to encourage the smelter to leave his ancestral calling for other industries.³

The decline of the indigenous smelting industry is the inevitable outcome of the supremacy of the scientific methods of production of the West over the rule-of-thumb process of India. Mining and metallurgy from their very nature are designed for mass production. The larger the size of the business unit, the greater is the opportunity for securing advantageously the economies of large-scale production. The Western countries during the nineteenth century increased the scale of production to such an extent that they were easily able to undersell the products of small charcoal furnaces.

In studying the development of the mineral resources of India after Western methods, the first and foremost industry that attracts our attention is coal. The use of coal as an article of trade was unknown among the people of India. We do not find any reference to the existence of coal in India either in Milburn's *Oriental Commerce* or in Macpherson's *Annals of European Commerce in India*. The

Growth of the coal industry. Early history.

¹ Monograph on the Iron and Steel Industry of the United Provinces.

² Ball, *Economic Geology of India*, p. 398.

³ Review of the Mineral Production of India, 1919-23, p. 163.

existence of coal in Bengal has been traced as far back as 1774 and the priority of discovery and working of coal mines in the districts of Beerbhum and Pachete has been assigned to Mr. S. G. Heatly, Collector of Palamau.¹ In that year, a firm under the name of Sumner and Heatly presented a petition to the Revenue Council of Bengal for permission to work the coal mines of Bengal. The East India Company required small amounts of coal for their arsenals but it was indented from England. The firm of Sumner and Heatly proposed the following terms to the Government :—

- (1) That an exclusive right be granted to them for 18 years, of working coal mines and selling coal in Bengal and its dependencies.

(2) That in case they discover any copper, lead or any other mineral or metal except iron they agree to pay a fifth of their produce to the Hon'ble Company.

(3) That they will furnish the Hon'ble Company with ten thousand maunds of pit coal every year for five years to come, at the price of two Arcot rupees and three quarters per maund and after the expiration of five years they will at the market price of the time furnish the like quantity.

(4) That if the mines fail or do not turn out of a quality required for the Company's work they may be allowed on the above terms to dig any other mine that they may discover in course of their work.² The Revenue Council of Bengal granted a lease to Messrs. Sumner and Heatly as asked for, subject to the following conditions :—

- (1) That they shall not compel people to work for them ;
- (2) that they do not erect gunges or golahs of any kind ;

¹ Journal of the Asiatic Society of Bengal, Vol. XI.

² Petition of Messrs. Sumner and Heatly, dated the 11th August, 1774 (Asiatic Society's Journal, Vol. XI, 1842).

(3) that the Europeans or any other persons employed by Messrs. Sumner and Heatly shall be liable to be recalled by the Chief and Provincial Council of Burdwan without a reason assigned ;

(4) that they shall not receive or grant protection to any raiyats who may desert from the farmers or officers of Government with balances due on account of the rents ;

(5) that they shall not transfer the grant to any other persons unless by express permission of the Board.

In September 1775, the firm of Messrs. Sumner and Heatly delivered 2,500 maunds of coal to the Company's military stores but the Store-keeper did not furnish any report.

Indian coal unsatisfactory.

In 1777 another consignment of 2,000 maunds was delivered to the Company, and the military Store-keeper who used it in the Company's ordnance factory reported it to be unsatisfactory. " It burns away very quick, the refuse is nothing but clinker, slate and dirt, without the least remains of cinders or clear ashes, and it wastes the iron very much. Yet these coals are preferable to those sent for a former trial. It is plain from this trial between the two sorts of coals, that with one maund of the British, the same work may be performed that can be done with two maunds of the country, in much less time, and with not near so great a waste of iron." ¹ On this report Government ordered the return of this coal to the proprietors. The prospect of this new industry was blighted by the refusal of the Government to buy any more coal. There was no other market open to the industry at the time and the concern was abandoned. Another reason which chilled the enthusiasm of the enterprisers was that Government recognised the impropriety of permitting their revenue and judicial officers to engage in speculation and prohibited

¹ Report of Major Green, 18th January, 1778.

the lending of money on such accounts. But in the meantime, the importation of coal by the Government of India was the subject of comments by the Court of Directors. The Court of Directors in their letter, dated 8th April, 1808, pointed out to the local Government the enormous expense to which they were subjected by the exportation of coal to India. They wished to know the purposes for which it was wanted and whether charcoal would not be equally serviceable and stated that if no remedy could be devised they must transfer their ordnance works home. The Earl of Minto who was then Governor General of India ordered the Military Board to express an opinion on the practicability of substituting Beerbhum coal for sea coal for purposes to which the latter was applied.¹ In their reply the Military Board stated that as they had never had any opportunity of seeing or knowing the quality of Beerbhum coal, they wanted to be favoured with any communication that the records of Government might contain on this subject and in what manner some of it might be obtained. This letter indicates that the previous experiments made with Indian coal were forgotten and doubt was expressed as to the availability of coal in India. Rennel's Map of Bihar in 1778 announced the existence of a coal mine near Palamau. The existence of coal at Burdwan has been known as early as 1804, when it was observed by the officers of a regiment marching across the district. This discovery was communicated to Major General Hardwicke, who was then in charge of the ordnance works.²

When a sample of coal was procured from the district of Burdwan, Major General Hardwicke after experiments expressed his view in the following words: "In the smith's

¹ Letter of the Governor General in Council, 5th September, 1808.

² Report relating to the Coal-fields of India, p. 23

forge, I found it inferior to common charcoal for producing the desired heat for working iron, the workmen unanimously pronounced this fuel unfit for their use. I tried it in combination with English coal, the result was an inferior heat to that produced from European coal and charcoal. Under such demonstrative proof, I do not hesitate to express my opinion, that the discovery of this coal promises no advantage for the uses of our blacksmiths in iron work."¹ Thus for the second time Indian coal failed to satisfy the authorities, and the reason for it was that only surface coal was used. In 1809 Mr. Suttie wrote to the Board of Revenue that coal had been discovered in the Zemindary of Jerrea, that the beds were superficial and had never been worked as the people were entirely unacquainted with the nature and qualities of the substance. He suggested that it might be transported to Calcutta by the new road at an expense of Rs. 85 per 100 maunds but by boat during the rains the cost would be Rs. 12 per 100 maunds.²

In 1814 the Marquis of Hastings expressed a desire to ascertain beyond doubt, whether the coal of India was of a quality suitable for the purposes of the forge. So far from being discouraged by the results of previous experiments, he considered them to afford a strong presumptive proof, that there was coal here well calculated for military purposes, that the surface coal might be expected to fail here as in England where some of the excavations reached the depth of 250 yards before proper coal was met with.

He appointed one Mr. Rupert Jones to report on the coal resources of India. In his report Mr. Jones stated: "Taking into consideration the various occurrences in the N.W. and N.E. quarters of Bengal, I am induced to think that the coal formation of

Report of Mr. Jones.

¹ *Vide Journal of the Asiatic Society, Vol. XI.*

² *Letter from Mr. Suttie to the Board of Revenue, 28th June, 1809.*

both countries joins under the delta of Bengal, and that the alluvial deposit is of no great thickness, the dip of all the coal seams on the N.E. frontier favours this opinion, and it is not improbable that this great line of coal enters China."¹ This report was considered too optimistic in view of the absence of geological data. He pointed out that one of the advantages of Bengal coal being introduced into Calcutta would be that it would provide a better and more economical fuel for burning the Sylhet limestone than the firewood then in use. He could hardly realise the imperative necessity of an abundant and cheap supply of coal for commercial and industrial prosperity. With an advance from the Government of Rs. 40,000 he began to work a mine at Raniganj but his concern proved a failure.

The lease of the property was taken over by Messrs. Alexander & Company and this is the first regularly constituted mining company under European supervision and with European capital in Bengal. The year 1820 might be recorded as the date of first regular operation in the Raniganj coal-field.²

The second great impetus to the development of the coal industry came from the demand for coal for steam navigation. Steam navigation commenced in India in 1828. The inland steamers depended on the supply of coal received in Calcutta from the Raniganj coal-field. This coal was sent by country boats to Amta through the Damodar which was navigable only during the rains. The uncertainty of navigation in the Damodar caused interruption in the supply of coal in Calcutta in 1835. In 1835 the Government of India in a resolution recorded that "Great disappointment was experienced in the upper stations of the Ganges in particular, which did not receive adequate supplies

¹ Asiatic Researches, Vol. XVIII, p. 169.

² Report relating to Coal Fields in India, 1836-45.

of coal for their depots till after they were required. Such accidents will be occurring constantly as the inevitable consequence of the entire supply of coal being drawn as at present from one spot. The Government have, however, knowledge of other mines in various parts of the territory of this province more conveniently situated than the Burdwan mines and they cannot believe that means may not be found of bringing these resources also into play.”¹ They appointed a Committee to consider all the information on the subject collected at the Presidency and to recommend what further examinations or surveys should be ordered for the purpose enabling Government to decide as to the best means of procuring coal applicable to the requirements of steam navigation in the interior. The Committee began to collect information on the coal resources of India from various persons who had local knowledge of its existence and working. In 1841 Mr. J. Homfray noticed the existence of coal in the following areas in the district of Burdwan—Singharun, Nulla, Barakar, Raniganj, Salma and Chinacoory. He also found 14 companies working in the different fields, four of whom were of any importance. The attention of the Committee was also directed to Assam. The first bed of coal that appears to have been brought to notice was that worked by Mr. Scott with a view to supply the steamers intended to ply on the Brahmaputra. The bed of coal worked by Mr. Scott was under the Naga Hills. In the immediate vicinity were iron mines worked by the Nagas. Other beds were also discovered. Captain Jenkins, the then Commissioner of Assam, expressed the opinion “From a consideration of all the circumstances, I think there is reason for supposing that a very extensive coal-field or series of fields

Appointment of the
Coal Fields Com-
mittee.

subject collected at the Presidency and to
recommend what further examinations or

associated with other valuable materials extends from Singpho Hills east along the Naga Hills south, all on the south side of the valley to the hills of Cachar." ¹ In a subsequent letter Captain Jenkins pointed out that difficulties in the means of transportation precluded the use of coal for the purpose Government had in view but he was optimistic in its future development. He observed, "Should the coal-fields of Assam be of no present service for use in Calcutta or the west of India, the full development of our abundant resources in this invaluable mineral may be the occasion of the establishment of local manufactures or of its conversion into use in the Eastern Provinces and the production of results highly beneficial to the trade and commerce of Bengal." ²

Coal was known to exist in Palamau still earlier than the period at which it was brought to notice at Burdwan, since several spots were marked as coal mines on Arrow Smith's map, but it was not till after the introduction of steam navigation that the fact aroused any interest, when Mr. A. Prinsep, then Collector of the district, directed attention to its importance. Thus, we find that by the middle of the nineteenth century the important coal-fields of India were discovered, though no accurate estimate could be made of the amount available owing to the absence of requisite data. The report of the Coal Committee in 1845 drew pointed attention to the difficulties of transport and the great expense involved in bringing coal to Calcutta : "The distance of the nearest mines from Calcutta is about 90 miles in a direct line. But the circuit by which coal is carried down the Damodar is 200 miles nearly and that an expense of Rs. 10 per 100 maunds for boats, and an equal sum for the expense of large depots at the foot of the rapids of the

Existence of coal
in Palamau in Chota-
Nagpur.

¹ Letter from Captain Jenkins to Captain Henderson, 23rd March, 1837

² Letter from Captain Jenkins to Captain Henderson, 4th May, 1837.

Damodar and for wastage and loss of boats ; thus making the present expensé of carriage Rs. 20 per 100 maunds or 3 annas 3 pies per maund nearly." ¹ The average selling price of coal being 5 as. a maund in Calcutta of which 3½ annas incurred for carriage, the Committee concluded that without some better means of delivery, the increased demand for Burdwan coal could not be met with any very material reduction in price in Calcutta ; and unless there were improvements in the means of transportation the degree of enterprise directed towards the Burdwan mines must be comparatively limited. The Committee recommended that the coal-field should be more accessible either by (a) a canal on the Ajay, or (b) by connecting the Damodar directly with the Hooghly, provided the upper part of the river above Burdwan be capable of improvement, or (c) by railroad.

Improvements in
transport suggested.

About the production of coal there are no statistics available at this time. But the Coal-fields Committee point out that between 1828-32 the average consumption of Burdwan coal was 166,452 maunds and during 1840-44 it amounted to about 1,200,000 maunds and production consequently was not far wide of this figure.

Up to the middle of the nineteenth century the production of coal was insignificant. It was in the fifties that the industry showed signs of development. The administration of Dalhousie ushered into India the railway age with a vigorous policy for railway construction. The East India Railway which was opened in 1854 passed through the Ranigunj coal-field. * It served not only as a carrier but as a large consumer of coal. In the fifties the foundations of the two important modern industries—cotton and jute mills—were laid. These two factors contributed to the development of

The introduction of
Railways.

¹ Report of the Coal-fields Committee, p. 138.

the coal industry throughout the latter half of the nineteenth century. The potential demand for coal was realised and attempts were made to estimate the coal resources of India and their geological features. The coal measures in India belong to a geological period considerably more recent than that in which the coal measures of the United Kingdom are deposited. In the Indian peninsula the coal is of the Permian-triassic age and belongs almost entirely to the lower Gondwana period. Outside the Indian peninsula, coal is still more recent, mostly belonging to the tertiary age. No accurate statement can be made as regards the total amount of coal available but Geologists are inclined to put the total coal area as occupying about 35,000 square miles. Mr. Dunstan in a paper read before the Society of Arts is inclined to think that the coal resources of India are almost inexhaustible. "Having regard to the extreme thickness of many of the seams which sometimes exceed 100 feet, it is clear that India possesses even after all allowances have been made for difficulties of working and other deficiencies, an enormous supply of fuel which will soon render her independent of other sources of supply, and which in time to come may even be drawn upon by other nations whose coal deposits are in process of depletion."¹ A rough idea of the

Estimate of coal
resources.

coal reserve of India may be formed from the following figures given by Mr. Dunstan.

	Area.	Estimated Reserves (million tons).
(1) Giridhi	8 Sq. miles	136
(2) Raniganj	500 "	14,000
(3) Jheria	200 "	864
(4) Bokara	220 "	1,500
(5) North Karanpura	472 "	875
(6) South Karanpura		75

¹ Journal of the Society of Arts, 1902.

It has often been held that the poor quality of Indian coal, on account of its low calorific value and high percentage of ash will act as an impediment to the development of Indian industries. "Taking all the defects of Indian coal of average quality into account," says Mr. Dunstan, "it may be said to be from 17 to 20 p.c. inferior to the average British coal of the same type."¹ But Indian coal is not inferior to South African, Japanese or Australian coal as the following analysis will show :—²

Quality of Indian coal.

	Ash. %	Calories.
Raniganj	9.74	7236
Jheria	11.70	7481
Natal	10.03	7487
Transvaal	16.08	6440
Japanese	10.59	7116
Australian	11	7278

The above figures clearly demonstrate that the best Indian coal is at least as good as the average level of the best Natal coal and that it is distinctly better than the Transvaal or the Japanese coal.

One important obstacle to the development of Indian coal industry has been the uneven distribution of coal resources. 94 per cent. of the Indian output come from the Bengal coal-fields. In 1881 Mr. Ball remarked that "the development of the coal resources of the country is as yet in a very imperfect condition. Out of upwards of 30 distinct fields in peninsular India only four or five are worked at all and of these only two have arrived at such a condition that

¹ Journal of the Society of Arts, 1902.

² Report of the Coal Committee, pp. 25-26.

they can raise from 1,000 to 2,000 tons a day. The reason for this state of things is not far to seek. Most of the coal fields are too remote from the ports and centres of manufacturing." ¹ The result of this has been that the important centres of industry like Bombay and Ahmedabad have relied mostly on imported coal.

Between 1852-53 and 1879-80 the import of foreign coal into India rose from 43,562 tons to 587,634 tons. During the same period the local production increased from 243,443 tons to 898,239 tons. Since 1893 the industry took a new turn. In that year the Jheria coal-field began to be exploited and the Indian output increased so much that the imports gradually began to decline. At the same time Indian coal became an important factor in the Eastern market. The following figures clearly bring out the position of the industry :—

Year.	Quinquennial average production ('000 tons).	Export ('000 tons).	Import ('000 tons)
1896-1900	4,228	305	333
1901-05	7,001	569	205
1906-10	10,896	775	344
1911-15	14,739	771	427
1916-20	18,400	620	44
1925	19,900	229	482
1926	20,100	240	402

In the beginning of the present century the Indian Mining Association represented to the Government that the natural growth of the industry was hindered on account of various factors, viz., inadequacy in the transport and distribution

Obstacles to development.

¹ Ball, *Economic Geology of India*, p. 61.

facilities, heavy railway freight charges and inadequate and inefficient loading facilities in Calcutta, the port of shipment. They pointed out that "Even if the Indian coal-carrying lines levied freight on the basis of the minimum rate, their charges would, the Committee believe, be in excess of those ruling in other great coal-producing countries such as America. Freight charges are in consequence so high that in the opinion of the Committee they act as a decided hindrance to the development of coal-fields of India."¹ But inspite of these difficulties the progress was continuous and the output nearly doubled in the course of two decades. During the European war the coal industry enjoyed unusual prosperity. The supply of foreign coal in the Indian ports greatly diminished and at the same time the wave of industrialism stimulated the demand for coal. Though the production of coal increased, the supply fell short of the demand. The situation was further complicated by an inadequate supply of wagons required for the growing traffic. During the post-war period the situation did not improve and many industries suffered severely from the difficulty of obtaining adequate coal. It was therefore felt imperative to conserve the supplies of coal in India by controlling export. In 1920, the Government of India following the example of the United Kingdom and South Africa prohibited the export of coal from India except under license. A rationing scheme was drawn up and the supplies of Indian coal were allowed only to important bunkering ports in the vicinity of India. This restriction however failed to ease the situation but on the other hand the gravity of it was accentuated by poor raisings in the coal-fields which in 1920 were some $4\frac{1}{2}$ million tons less than they had been in 1919, and by inadequate railway facilities for the transport of Bengal coal. The Government of India consequently

¹ Annual Report of the Indian Mining Association, 1900.

totally prohibited the export of coal from India to foreign markets in 1921, and bunkering at Indian ports was also restricted. These measures were however temporary and with the improvement in the situation in 1922, the restrictions were relaxed and finally removed from January 1st, 1923. The result of this embargo was the disappearance of Indian coal from overseas market which was captured by South Africa.

With the disappearance of the post-war boom, the Indian coal industry has been subjected to a depression of unprecedented magnitude. The causes of this depression have been attributed to various factors. It was asserted that the importation of bounty-fed coal from South Africa affected the industry considerably and it should be protected by a counter-vailing import duty. It was also urged by the mining interest that the railways by opening up their collieries contributed to the depression. The situation was however so serious that the Legislative Assembly adopted a resolution in March, 1924 to examine the claim of the industry for a protective duty by the Tariff Board. The Government of India, however, on an analysis of the figures of import and export of coal came to the conclusion that the competition from which Indian coal had been suffering was not so much in the Indian market as in overseas markets and that these markets could not be recovered by the protection of the Indian market. They therefore appointed an expert Committee to enquire and report “(1) generally what measures can be taken by Government, by the coal trade, by the railways and by the ports, whether singly or in combination, to stimulate the export of coal from Calcutta to Indian and foreign ports ; and (2) in particular whether effective measures can be taken for the pooling and grading of Indian coal for export and for bunkering.” The Coal Committee after an exhaustive enquiry found that Indian coal had been ousted

¹ Report of the Coal Committee, p. 86.

from the markets where it had once a commanding position on account of the embargo and established business relationships would prove an obstacle to the re-introduction of Indian coal in those markets. Besides, the consuming centres were dissatisfied with Indian coal on account of the unreliable quality of the coal exported. The problem of the recovery of foreign market depended on two considerations—price and quality. As regards quality, the best Indian coal can compete in any market in the East but particular care must be taken to guarantee the precise quality of coal to be delivered. With a view to achieve this object the Coal Committee recommended the establishment of a Grading Board which would grade collieries which produce coal for export and would arrange the issue of a certificate for each consignment of coal exported so that the purchasers should know exactly what they were buying. This recommendation was accepted by the Government and a Coal Grading Board was actually constituted in 1926.

The rehabilitation of the coal industry depends not merely on measures for stimulating exports but also upon the improvement of internal organisation entailing a reduction in the cost of production and upon improvement of railway facilities. The Coal Committee pointed out that the increased use of mechanical appliances for coal-cutting would not reduce raising costs, unless it were accompanied by an improvement in railway facilities which would permit of an increased output. Evidence showed that in many collieries working with mechanical appliances, the output was 40 p.c. less than their potential capacity and this was due to the difficulty in securing a regular supply of wagons.¹ The Committee therefore expressed the view that for the development of the industry “a regular and adequate wagon supply throughout the year is essential.” Some minor suggestions made by the Committee were that stacking

¹ Report of the Coal Committee, p. 86.

should be avoided and economy in loading could be effected by the laying of rails right up to the working of the pits so as to permit the tubs being loaded direct by shovels. The export of coal was to be stimulated by the increase in rebate from 25 p. c. to 33½ p. c. of the freight. There are, however, other difficulties with which the industry is confronted. A critical observation of the conditions of the industry reveals that there are some vital defects in the organisation of the industry itself the most important of which are (1) small size and separate ownership, (2) managing agency system and (3) internal competition. The average output of a colliery is something like 1,600 tons a month or say 50 tons a day. This entails uneconomic production and high overhead charges. What is required under the present circumstances is that by judicious amalgamation the size of a working colliery must be enlarged.

The Indian coal industry enjoys a monopoly of the home market with the exception of the ports of Bombay and Karachi, and yet it is being run at a loss. The fact is that it is the internal competition amongst the mine-owners that is chiefly responsible for the unusually low price that the industry is securing for its product. It is therefore necessary to take collective measures for the industry as a whole, and to organise production, sale and distribution on a rational basis. The mining industry might consider the advisability of establishing a selling syndicate in order to avoid cut-throat competition and wasteful production, if the situation is to be improved.

The supply of labour in the coal mines deserves our consideration next. The supply of labour is unstable and intermittent. As the Coal Committee points out "The labourer in the Indian coal-fields is primarily an agriculturist and considered as a coal miner, is merely a casual and unskilled worker." Besides, on account of low standard of comfort, if the harvests are good, fewer people are attracted to the

coal-fields. The inefficiency of the Indian worker is borne out by the low output per head as contrasted with other countries. The output per head per annum is 193 tons in Natal, 316 tons in the Orange Free State and 328 tons in Transvaal, whereas in India it is less than 100 tons per head per annum. An increased outturn may be expected of the operatives if they are settled on the mines and take up mining as the sole means of their livelihood, and it will ultimately pay the employers if they make the lives of the operatives comfortable on the mines. Besides, the introduction of mechanical appliances and the development of by-products would place the industry on a sound footing if an attempt is made in these directions. A policy of protection cannot give any relief to the industry as imports are very small but on the contrary it will raise the cost of power to other industries dependent on it.

The development of the iron and steel industry in India in the nineteenth century after European methods is a record of failure. The first authentic report to manufacture iron on a large scale is traced to the proposal of one Indranarain Sarma. In 1774 Mr. Sarma submitted a proposal to the Government for manufacturing iron in the mountainous part of the district of Beerbhoom. The terms proposed by him were “ (1) the lease to be granted for 7 or 10 years ; for the first year on account of the great expense which I shall incur by cutting the jungle and creating saals (furnaces) I can pay nothing. For three following years I will pay Rs. 2,000 per annum and for the remaining years of the lease I will pay Rs. 5,000 per annum, which shall be in full payment of all rents or customs whatever.

(2) I will engage, if business succeeds, to supply Government with whatever iron they may want at the bazar price of the time.

(3) I will not force any raiyats from the malguzari lands nor give protection to any who may desert with arrears of rent due to the farmers of revenue.”¹ The terms proposed by the applicant were undoubtedly liberal. There is nothing on the record to show that the venture was undertaken. It is probable that the project was abandoned after deliberation.

In 1777 Messrs. Motte and Farquhar submitted a memorial to the Council of Warren Hastings for casting shot and shells on account of the Company in Bengal. They pointed out that amongst the various ores produced in this country there is one found in great abundance in Ramgur which yields an iron so soft as to be fit for few of the common purposes of life ; but this property renders it, in an eminent degree, superior to all other kinds, for almost every work in cast iron and particularly for the fabrication of cannon. They pointed out further that the establishment of iron works in Bengal would not only supply the market with many cast iron utensils then imported from China but a valuable branch would be added to the exports of this settlement. They therefore proposed :²

(1) That a sufficient quantity of land be assigned to them in the Perganah of Jerria.

(2) That they be granted the exclusive privilege of working iron and steel in the European manner within any part of the Hon'ble Company's possessions which lie on the west side of the meridian of Burdwan and of selling the produce of such manufacture free from duty in any place under the Presidency of Fort William for the term of 19 years.

(3) That they be permitted to employ Europeans in their works.

¹ Journal of the Asiatic Society of Bengal, Vol. XII.

² *Ibid.* See also Ranade, *Essays in Indian Economics*.

(4) That they engage to cast shot and shells at four-fifths of the price at which the Company purchase them.

(5) That they would pay one-twentieth part of the profits of a lead mine which they would work after two years' working.

After a reference to the Burdwan Council the Government of Warren Hastings granted the lease to Messrs. Motte and Farquhr.

Mr. Farquhr by a subsequent proposal wanted the loha mahals of Birbhum to be included in the lease, and the terms of the lease were modified accordingly. An advance of Rs. 15,000 was granted to him to construct iron works, but the project was, however, shortly given up. For nearly three quarters of a century after this venture, nothing was heard about the iron ore resources of Bengal and Bihar.

In Madras the existence of iron ores in Salem attracted the notice of Mr. J. M. Heath, a member of the Madras Civil Service in 1830. He obtained the exclusive privilege of manufacturing iron on a large scale in the Madras Presidency. Trial works were erected at Port Novo in the South Arcot district with a subsidy from Government. The business was taken over in 1833 by the Port Novo Steel and Iron Company and additional works were started on the Malabar Coast, but the undertaking proved a failure. In 1853 the East India Iron Company was started with various concessions from Government. It erected two blast furnaces—one in the South Arcot district and another on the Cauvery river in the Coimbatore district. These furnaces were stopped in 1858 while the works at Port Novo were closed in 1866.¹

In the province of Bengal the question of iron manufacture was renewed in 1852 for the supply of rails to the proposed railways for India. Dr. Oldham having examined the iron

Question of iron
industry reopened.

¹ Review of the Mineral Production of India, 1919-23, pp. 130-131.

ores of Birbhum expressed the opinion that the amount of ores available in the area was too inadequate to meet the demands of a large iron works if established there.¹ About the year 1855, the Beerbhum Iron Works Company was started by Messrs. Macay and Company of Calcutta and in 1860 it was reported by Mr. Blanford that the manufacture of iron by the Company was being carried out at a loss. The reasons assigned for the failure of this concern were that the supply of charcoal and perhaps also of flux was not sufficient for very large works. He, however, pointed out that an iron work should be established in proximity to a coal area and recommended Raniganj as a suitable site.

- In the United Provinces the existence of iron ores in the Kumaon division attracted the attention of Government and in 1856 the Directors of the East India Company sent out Mr. Sowerby and a large staff of mining assistants to carry on the smelting of iron in the interior.

Attempts in the
United Provinces.

It was soon established that iron could be manufactured at a rate cheaper than that at which British iron was imported. A firm under the name of Davis & Co., was permitted to undertake operations for the same purpose in other parts of the hills. Government works soon failed but were taken over by another Company known as Drummond & Co. In 1862 the two Companies were amalgamated under the title of the North of India Kumaon Iron Works Company, but it was wound up in 1864.² The failure of these works was attributed to fuel difficulty for they depended entirely upon charcoal. The period of experiments for the manufacture of iron now came to a close. It was demonstrated that the manufacture of iron on a large scale with charcoal was not a practical proposition.

¹ Ball, *Economic Geology of India*.

² Dobbs, *A Monograph on Iron and Steel Works in U. P.*, p. 10.

In 1874 the Bengal Iron Company was founded to work out the ores of the Raniganj field. In 1879 this Company ceased to work. The causes that brought about the failure of this concern were insufficiency of capital and the poor quality of ores.¹ These works were taken over by Messrs. Martin & Company in 1889 and were placed on a sound financial footing. There were serious misgivings as to the future of the Indian iron and steel industry. But faith in the successful exploitation of the Raniganj ores was not altogether lost. Thus Mr. Ball remarked, "By ordinary blast furnaces adapted to the removal of an excess of phosphorus, it is possible that in the Raniganj field iron and steel of high qualities might be manufactured under proper management. But as regards the rest of India, with the doubtful exception of Upper Assam, there does not appear to be any solid ground for hope that iron under existing conditions can be manufactured profitably."² But the turning point in the history of the iron and steel Industry came with the establishment of the Tata Iron and Steel Company in 1907 at Sakchi (Jamshedpur). In 1904 Mr. P. N. Bose of the Geological Department drew the attention of the public to the existence of valuable iron ores in the Mayurbhanj State. He remarked "It is very difficult to make even

The turning point in the industry

¹ Mr. Justice Ranade thinks that in addition to the scarcity and heavy cost of fuel there were other causes such as

- (a) smallness of the capital employed,
- (b) the inaccessibility of some of the places chosen in respect of railway and sea communication.
- (c) The conditions of purpose shown by the Government which made them impatient of results.
- (d) Want of skill and good management on the part of the persons employed to conduct the experiment.
- (e) Delays caused by red-tapism and the unwillingness of Government to subsidise or guarantee interest during the experimental period of the concerns.

Ranade, *Essays in Indian Economics*, p. 190.

² Ball, *Economic Geology of India*, p. 348.

Discovery of iron
ores in the hills
of Mayurbhanj.

an approximate estimate of the quantity of available iron ores. But it would probably be no exaggeration to say, that a practically inexhaustible supply for several furnaces on a modern scale may be depended upon. The ores are easily accessible from the Bengal Nagpur Railway and a line of 25 or 30 miles would tap the Gurumaisini area. Limestone occurs at several places in and close to the iron ore area." ¹ The late Mr. J. N. Tata had already visualised that the future development of Indian industries must ultimately depend on the successful establishment of the iron and steel industry in the country. The publication of the information regarding iron ores was opportune and elaborate prospecting operations were carried on by Messrs. Perin and Weld in the Mayurbhanj State and the Central Provinces and the foundation of the Tata Iron and Steel Company was laid at Sakchi. The Government of India took the liveliest interest in this project and determined to encourage it by making certain concessions which were asked for by the Company. They agreed to construct a railway from the hill to the main line ; they arranged with the Bengal Nagpur Railway that the freight on raw materials required

Concessions to the
Tata Company.

for the works should be reduced to 1½ pie per maund and that this rate should apply in the case of manufactured products sent for export. They also engaged to take for a term of ten years 20,000 tons of steel rails each year provided they were rolled to the required standard and supplied at a cost not exceeding that which would be incurred in importing rails of the same quality.²

Discovery of Singh-
bhum area.

The discovery of iron ores in the district of Singhbhum in 1908 has given a further stimulus to the progress of iron and steel

¹ Records of the Geological Survey of India, 1904, p. 169.

² Speech of Sir John Hewett, Financial Statement, 1906-07.

industry in India. The deposits in this area are remarkable for the enormous quantities of extremely rich ore they contain and are perhaps one of the largest and richest ore-fields of the world. Analysis has shown that Indian ores contain more than 60 per cent. of iron whereas the best in European countries hardly contains 50 per cent. An idea of the iron ore resources of India may be made from the

Estimate of Iron
ores.

following figures :

	(Million tons.)
Singhbhum district	1,074
Keonjhar State	806
Bonai State	656
Disputed country	280
(Bonai State or Keonjhar State)	
Mayurbhanj State	16
	<hr/>
	2,832

As regards the total iron resources which India contains the following observation is interesting : "The quantity estimated is that which may be regarded in sight, while almost certainly much larger quantities may be obtained by continuation of the ore bodies beyond their proved depth."¹ Of the other raw materials required for iron manufacture the most important are coal, limestone, and manganese ore. In order to produce 1,000 tons of pig iron per day in two modern blast furnaces 1,600 tons of coal are required. The question of the expansion of the iron and steel industry raises at once the question of the adequacy of suitable coal in the country. The only coal so far discovered in India which provides a coke suitable for metallurgical purposes is that from the Jheria field. Doubts have been expressed as to the availability of large quantities of suitable coking coal in the country. The Coal Fields Committee estimated the

¹ Review of the Mineral Production of India, 1919-1923, p. 155.

available supply of coking coal at 3,000 million tons out of a total prospective supply of 54,000 million tons of coal.¹

The other raw materials required for the industry are available in sufficient quantity in close proximity to the works. The progress in the development of the iron and steel industry may be gauged from the following figures of the production of iron ores in India :—

1910	42,653	(tons)
1911	342,842	„
1914	408,441	„
1920	558,005	„
1923	821,053	„
1925	1,544,578	„
1930	1,760,501	„

In the course of 15 years the production of ores increased from 42,653 to a little over $1\frac{1}{2}$ million tons. Not only is the Indian iron and steel industry meeting a portion of the requirements of the country but a considerable quantity of pig iron is being exported to the markets of the world. The amount of pig iron exported yearly during 1912-13 to 1927-28 was as follows :—

1912-13	92,614 tons	Rs. 47 lakhs
1913-14	82,592 „	„ 42 „
1915-16	72,682 „	„ 40 „
1920-21	48,000 „	...
1926-27	309,000 „	„ 140 „
1927-28	...	„ 179 „

¹ Appendix to the First Report of the Tariff Board on the grant of protection to the Steel Industry of India. This estimate of the available supply of coking coal has been recently modified. Sir L. Fermor thinks that only 1,700 million tons of coking coal are available which at the present rate of extraction with a recovery of 50 p.c. will last only 33 years from 1932. See Bulletin No. 54, Indian Industries and Labour.

“ It is rather a curious circle,” says Mr. Chartres, “ in the evolution of the world that for centuries India exported steel, until her trade was killed by developments in Europe, and now she is beginning to reassert herself by exporting pig iron to almost every country in the world. The day may come when it will pay better to export steel rather than pig iron.”

The great European war stimulated greatly the development of the industry. The supply of iron and steel which India was accustomed to import was largely restricted. On the other hand the demand of the Munitions Board imposed a serious strain upon the resources of India. The unprecedented rise in the price of iron and steel was a great source of profit to the Tata Iron and Steel Company. The dependence upon foreign countries for the supply of an indispensable necessity of life was recognised as a national danger, and the iron and steel industry came to be regarded as an industry of national importance. The success of Tata's concern induced others to float new companies and the result was the establishment of the Indian Iron and Steel Company at Burnpur. We have now three big concerns for the production of iron and steel in the country. The rapid expansion in the production of pig iron and steel by the Jamshedpur works can be seen from the following figures :—

	1916-17 (tons)	1921-22 (tons)	1925-26 (tons)	1927-28 (tons)	1933-34 (tons)
Pig iron	147,497	270,270	573,196	644,296	1,100,000
Steel ingots	139,433	182,107	470,557	599,583	721,000
Finished steel	98,727	125,871	319,957	408,348	551,000

If the progressive increase in the production of iron and steel is maintained there seems to be no doubt that India can be made self-sufficient in respect of her requirements

of steel. Up to the year 1920-21 the prospects of the iron and steel industry appeared bright but a complete change took place in 1921-22. The Indian industry could not escape the effects of the post-war industrial depression throughout the world. The price of imported steel fell abruptly and the Tata Iron and Steel Company found itself involved in a serious financial difficulty. It was extremely difficult for the industry to adjust itself to new conditions. The cost of production rose considerably during the war period and at the same time owing to the slump in the steel industry throughout the world the price of steel fell almost to the pre-war level. The industry consequently had to be protected against foreign imports and the Government had to meet its claim by the imposition of a protective duty.

Other mineral industries—Mica.

Other mineral industries that have developed in recent years are of minor importance. In the world's industry mica and manganese ore have assumed considerable importance. The annual Indian production of mica is at least equal to the total output from all other countries. It is not surprising, therefore, to discover that for over twenty-five years India has been the biggest producer of mica. The use of mica was known in India long before its commercial exploitation by European capitalists. It is used in lieu of glass for lanterns, doors of furnaces and in some countries in windows. As a glazing material for pictures and for the backing of mirrors it is also largely employed. In India small fragments are largely used in tinsel ornamentation of temples, palaces, banners, etc. In powder form it is used for ornamenting pottery. In western countries the chief use of mica is for electrical purposes as an insulator, for electric heaters and cookers and in electrical condensers.

Although mica is one of the most widely distributed materials in India, its occurrence in plates of sufficient size to be of commercial value is limited to a few particular

tracts. The chief mica mining areas in India are those of Hazaribagh in Bihar and of Nellore in Madras. The mica mines of Hazaribagh were described by Dr. McClelland as early as 1849. In 1863 according to the Statistical Account of Bengal 10,000 maunds of mica were exported at Rs. 3 per maund. Since then mica mining has greatly expanded and it is worthy of note that practically all the Indian mica is exported to Europe and America, there being no industry to consume it locally. The average export of mica during the quinquennium of 1919-23 was 58,600 cwts. valued at 78 lakhs of rupees.

The development of the manganese quarrying industry in India reached its zenith in 1907 when Manganese. the output rose to 902,291 tons of ore. In 1908 India took the lead amongst the countries producing manganese ore. During the pre-war quinquennium, India produced 40·8 per cent. of the world's average total annual production of some 1,750,000 tons of manganese ore. During the war quinquennium, the Indian production fell to 34·1 per cent. while in the post-war period it has increased to 43·3 per cent. India suffers greatly through exporting her manganese ore in raw condition, instead of converting it into ferro-manganese. The manufacture of ferro-manganese was established in 1915 by the Tata Iron and Steel Works. The other minor minerals in India are petroleum, salt, bauxite and chromite which have been worked out partially.

We have traced the development of the mineral industries of the country and they supply an important criterion of industrialism in a country. It has been asserted that the degree of industrialisation which a country has attained is best measured by the production and consumption of coal and iron. Judged by this standard the industrial development of India will appear insignificant in comparison with European countries.

	Coal (million tons) 1920	Fig Iron (million tons)		Steel (million tons)	
		1918	1923	1918	1923
German Empire	129.23	19	11	18.6	14.5
United Kingdom	229.53	10.2	6.7	7.6	8.6
Belgium	22.05	2.4	3.9	2.4	3.9
France	33.27	5.1	10	4.6	9.3
U. S. A.	576.17	30.6	37.1	31.3	52.2
Japan	28.77	2.3	1.8	1.7	1.8
India	19.35	2	1.01	5.6	6

The figures of per capita consumption of coal will far more effectively demonstrate the comparative economic position of India among the industrial countries of the world.

India	...	...	.06 (ton) ¹
U. K.	...	...	3.41
U. S. A.	...	...	3.66
Germany	...	...	2.16
France	...	...	1.15
Belgium	...	...	3.19
Canada	...	...	2.80

Judged by this standard, India is lowest in the scale of development attained by the important manufacturing countries of the world.

It is, however, to be observed that the mineral resources of India have not yet been thoroughly tapped. Vast regions are still lying unexplored. Systematic survey and prospecting work will undoubtedly open up new resources and the mineral resources may be considered sufficient if a policy of industrialisation is pursued.

¹ Report on the Production and Consumption of Coal in India, 1923, p. 38.

CHAPTER V

MANUFACTURING INDUSTRIES

The nineteenth century, as we have seen, is a record of the decline of handicrafts. Of the handicrafts most adversely affected by the impact of the Industrial Revolution of the west, the most important was the cotton industry. Hand spinning has become extinct due to the importation of cheap machine made yarns but the handloom industry is still struggling though it is gradually yielding ground to the factory. The economic history of the European countries has indicated the inevitable supremacy of machine production over handicrafts and the course of industrial evolution in India is being influenced by the same economic factor. In India, too, the decline of handicrafts has led to the emergence of factories. The existence of an abundant supply of raw materials in the country naturally gave rise to the idea of their utilisation on a large scale with the mechanical appliances of the west, and the industries that first attracted the attention of the English capitalists were cotton and jute.

In the first half of the nineteenth century, attempts to introduce factory industries in India were insignificant as in many European countries. The first cotton mill founded in India in 1818 at Fort Gloster near Calcutta was the Bowreah Cotton Mills Company, Ltd. This Company was incorporated as a cotton mill, a coffee plantation and a rum distillery.¹

The first cotton mill in India.

¹ Watt, Commercial Products of India, p. 618.

About ten years later there was another attempt to establish a cotton mill in India. We have reference to this in a minute of Lord William Bentinck in which he remarked ; “ To those who so feelingly deplore the misery of the Indian manufacturer, it will be consolatory to know that a prospect exists for better days, with a hope also that her staple commodity, the cotton manufacture may still be rescued from annihilation. Mr. Patrick, an Englishman, is at this moment erecting a very large manufactory for the spinning of cotton twist by machinery to be moved by steam.”¹ We have another evidence as to the existence of cotton mills in India prior to the rise of the cotton mill industry in Bombay. In the report on a petition of the East Indian merchants in 1840 there is reference to the production of yarn by cotton mills in Bengal.² But the turning point in the history of the cotton industry is to be sought in Bombay rather than in Bengal. It was in 1851 that the idea of starting a cotton mill in Bombay originated with Mr. C. N. Daver, an enterprising Parsi merchant. The difficulties of this new venture were almost insuperable. There was no machinery in the country nor was there expert labour available either to set up or manipulate it. There was, further, no coal in Western India. The importation of British coal into Bombay solved the problem of fuel and machinery and expert labour were also imported and the pioneer spinning factory was inaugurated in 1854. The success of this venture induced Mr. Daver to start another mill which was known as the Bombay Throstle Mill. In 1858 Mr. Manekji N. Petit started the Oriental Mill with 30,000 spindles

Turning point in the industry.

¹ Minute of the Governor-General, dated 30th May, 1829.

² Evidence of Henry Gouger before the Lords Committee on a Petition of the East India merchants, Q. 2840. To what extent have you carried on the manufacture of cotton yarn ?

A. The mills have produced about 700,000 lbs of yarn per annum.

which was followed by the Victoria Mill with 60,000 spindles and 1,000 looms started by Sir Dinshaw Petit in 1860. In the same year were also projected five more mills. Thus was laid the foundation of the Bombay cotton mill industry with the enterprise and foresight of Parsi capitalists and the co-operation of British machinery and labour.

The progress of the cotton mill industry would have been rapid but for the American Civil War of 1861-64 which caused a temporary set-back. The supply of American cotton

Set-back due to the American Civil War.

being cut off, there was an unprecedented demand for Indian cotton by the Lancashire manufacturers. The price of raw cotton rose so high that the Bombay cotton merchants made fabulously large profits. The investing public thought of no other business than cotton exports. It is estimated that no less than 75 million pounds were added to the wealth of Bombay.¹ The sudden accretion of such a large amount of wealth induced the merchants of Bombay to launch many speculative schemes and cotton mills were neglected. But with the cessation of the cotton boom, Bombay was overtaken by a financial crisis of an unprecedented magnitude. By 1870 financial stability was restored and attention was again directed to the cotton industry which had been yielding steady profits during the preceding decade. About this time, Mr. J. N. Tata visualised the enormous benefit which India would derive

Efforts of J. N. Tata.

from an expansion of the mill industry.

Reliable data for the working of cotton mills were wanting in India and Mr. Tata consequently sailed for England to study the working of the cotton mills in Lancashire and the machinery required to spin and weave Indian cotton in the climatic conditions

¹ Rutnagar, Bombay Industries (Cotton mills), p. 12.

peculiar to the country. His investigations produced a far-reaching effect upon the expansion of the mill industry in India. During 1870-75

Renewed activity.

fifteen more mills were projected. During the next decade the progress of the industry was particularly rapid and 23 additional factories were built in Bombay. It was during this period that cotton mills began to be established in other parts of the Bombay Presidency. The mechanical improvements introduced into the mill industry in 1885 gave it another turning point. The substitution of the ring frame for the mule and

Mechanical improvements.

the revolving flat card for the roller card was a distinct advantage in the methods of production. Thus, the industry received a further stimulus and more mills were erected with new machinery.

During 1895-1900 the industry received a great set-back. Two severe famines in 1897 and 1899 brought about a complete collapse of agriculture. The cotton industry was in a great measure dependent upon the home market and the collapse of agriculture meant a considerable curtailment of the demand both for Indian mill products as also for handloom products. These difficulties were accentuated by the appearance of the bubonic plague in Bombay in 1896. This scourge appeared in such a terrible form that the population of

Effects of plague and famines.

Bombay left the city in large numbers. The mill industry was faced with a great scarcity of labour which caused a considerable curtailment in the output of the mills. The growth of the industry during the second half the nineteenth century may be realised from the following figures :—

Year.	Mills.	Spindles.	Looms.	Employment.
1854	1	...	...	...
1861	12	338,000	...	...
1879	58	1,500,000	13,000	89,637
1886-7	90	2,202,602	16,926	97,204
1890	114	...	...	99,224
1900	193	4,945,783	40,124	161,180

In the beginning, the cotton mill industry was located
 Localisation. mainly in the Bombay Presidency. In

1879, of the total number of mills in India three-fourths were situated in the Bombay Presidency and more than half the total in the city and Island of Bombay. By the end of the century there appears to be no appreciable change in its localisation. Though mills were being started in the up-country districts, Bombay was still the predominant centre of an important localised industry. Of the 144 mills in India in 1894-95 100 were in the Bombay Presidency and of these 69 were in Bombay City and Island.

The Indian cotton industry commenced its career as a
 Mill production. spinning industry and it retained this character for a long time. A reference to the figures of spindles indicates that during forty years the number of spindles increased from 338,000 to nearly five millions but the number of looms is insignificant. In 1905-06 out of 204 cotton mills 104 were exclusively spinning mills, eight were exclusively weaving mills and in the remainder both spinning and weaving were carried on. The production of yarn by the Indian mills has progressed steadily but not phenomenally. In 1895-96 the outturn was 432 million lbs. but in 1900-01 it fell to 352 millions. A significant feature of yarn production by Indian mills is that nearly three-fourths of the total output is coarse—i.e., of the counts varying from 11 to 30. This is due to the fact that Indian cotton is of short staple from which yarns of finer counts cannot be spun. Of the yarn produced by the Indian mills more than half was exported to foreign countries and the rest was consumed by Indian mills and handlooms. Thus in 1899-1900 the total output was 514 million lbs. of which 244 million lbs. were exported. China and Japan, up to the end of the nineteenth century, were the principal buyers of Indian cotton yarn. For finer counts of yarn India is dependent upon foreign countries. Up to the end of this period

the imports of yarn were derived mainly from Great Britain. In 1899-1900 the import of yarn from foreign countries amounted to 42·6 million lbs. which were largely consumed by handlooms. Of the woven goods Indian production contrasted very unfavourably with imports. Thus in 1899-1900 India imported more than 2,000 million yards of cloth from foreign countries whereas her mills produced 419 million yards.

The depression in the cotton mill industry which commenced in 1896 continued up to 1905. The Great American speculation in cotton sent up the price of raw cotton to such a height that the production of yarn became unprofitable. In 1905 the China market was again active and the harvests of the preceding three years were satisfactory with the result that the cotton mill industry enjoyed unprecedented prosperity during the two succeeding years. The American crisis of 1907-08 and the poor harvests of India in the same year affected the industry to some extent. But in spite of these temporary setbacks the rate of growth of the industry was fairly maintained. The development of the industry may be gathered from the following figures :—

	Mills.	Spindles.	Looms.	Hands.	Cotton consumed (bales of 502 lbs.).
1900-01	176	4,747,380	39,859	172,888	1,351,740
1910-11	217	5,948,634	82,965	230,649	1,905,866
1918-14	240	6,484,691	101,022	260,276	2,143,126
1920-21	245	6,845,824	123,544	332,179	2,120,230
1924-25	275	8,093,801	148,612	367,877	2,226,810
1930-31	312	8,890,723	171,975	395,475	2,688,176

During this period considerable change has taken place in the localisation of the industry. The lack of space in the Bombay city has prevented the addition of new mills there, but in up-country districts many new mills have been erected. Out of 312 mills the Bombay Presidency possessed in 1931,

146 mills followed by Madras with 25, the United Provinces 22, Bengal 13, and Central Provinces 7.

The Bombay cotton industry was largely dependent upon the China market for the disposal of its products, specially yarn. But this market was extremely fluctuating due to political disturbance and foreign competition. Before the nineties there was hardly any cotton industry in Japan. During the nineties Japan was slowly building up her cotton industry with raw cotton imported from India and the United States of America. In 1895 she had only half a million spindles which increased nearly three times in course of ten years. Japan thus became a formidable competitor of India in the China market for yarn. In the eighties and the nineties the Indian manufacturers got an advantage from depreciating exchange but with the closing of the mint to the free coinage of silver and the stabilisation of exchange after 1898 this advantage disappeared and the exports of yarn gradually dwindled.¹ The industry therefore had to seek a more stable basis for its existence. It will be manifest from the figures of spindles and looms that the number of spindles barely doubled whereas the number of looms increased four-fold. This means that the industry began to develop weaving more than spinning and consume yarn in the mills. In 1899-1900 the Indian mills produced 419 million yards of cloth but in 1913-14, *i. e.*, the year just before the declaration of the European War they manufactured 1,116 million yards. For the disposal of these products the industry is largely dependent upon the home market, only one-tenth of the products being exported abroad. Another noticeable feature of the industry during this period was

¹ The Bombay millowners in their representation to the Tariff Board for protection to the cotton industry complained that the depression in the industry commenced with the closure of the mint to the free coinage of silver. *Vide* Report of the Tariff Board on the Textile Industry, p. 4.

the tendency of Indian mills to spin finer counts of yarn. At the time of the controversy over the Tariff bill of 1896 the production of yarn above 24's was insignificant. In 1924 it was found by the Tariff Board that the production of yarn above 30's amounted to nearly 20 million lbs.¹ The production of piece-goods has increased considerably in the current century and a distinct tendency has manifested in the production of finer varieties. The following table shows the progress in production in recent years :—

	1916-17.	1921-22.	1925-26.	1931-32.
	'000 lbs.	'000 lbs.	'000 lbs.	'000 lbs.
Yarn ...	644,446	653,611	628,371	966,410
	'000 yds.	'000 yds.	'000 yds.	'000 yds.
Woven goods ...	1,425,674	1,609,141	1,792,166	2,989,900

The War supplied a great stimulus to the development of industry. The imports from foreign countries were greatly curtailed. The prices of cotton manufactures rose nearly three times. The consequence was that the Indian manufacturing industry passed through a period of phenomenal prosperity. Not only were many new mills projected in different parts of the country but the existing mills made large additions to their looms and spindles. Thus during 1913-14 to 1924-25 the number of spindles increased from 6·4 millions to over 8 millions and the number of looms from 101,022 to 148,612.

One significant effect of the European war has been the remarkable change in the direction and volume of trade in cotton goods. Before the war Great Britain's share in the import trade in cotton piece-goods was 97·1 p. c. but after the war it fell to 78·2 p. c. in 1927-28. There has, however, been a phenomenal increase in the Indo-Japanese trade. Before the war the imports of yarn and piece-goods from

¹ Report of the Tariff Board on the Cotton Textile Industry, p. 39.

Japan to India were hardly significant¹ being 1 million lbs. of yarn and 8·9 million yards of piece-goods. In 1924-25 however the imports of yarn rose to 32·3 million lbs. and the piece-goods to 155·3 million yards. Taking all piece-goods together the United Kingdom's proportion of the trade has fallen from 82 p.c. to 49 p.c. while Japan's has increased from 14 to 44 p.c. during 1926-27 and 1931-32.

Turning to the export side of the industry it is noticeable that the export of yarn has dwindled into insignificance. The average exportation of yarn during the pre-war quinquennium was 192·8 million lbs. but during the war it fell to 129·6 millions. In 1924-25 the export dwindled to 36·5 million lbs. The export of piece-goods shows a decided tendency to increase. The pre-war average export was 89·7 million yards and it rose to 154·9 millions during the war years. In 1924-25 the export increased to 180·3 million yards. The Indian piece-goods are consumed mainly by eastern countries specially Persia, Mesopotamia, the Straits Settlements, Aden, Kenya Colony, Ceylon and Portuguese East Africa.

The requirements of India for cotton goods are met from three sources:—Indian mill production, hand-loom products and imports. In the beginning of the present century India was dependent upon foreign countries for her clothing to a greater extent than at present. Thus in 1899-1900 the net imports of piece-goods into India amounted to 2,053 million yards. In the same year the Indian mills produced 419 million yards and the hand-loom 830 millions. Of the mill products 112 million yards were exported thus leaving 307 million yards for the Indian market. We thus find that imports accounted for 63·3 per cent. of the country's requirements, mill products 9·5 p.c. and handloom products 27·2 p.c. At the end of a quarter

Indian mills production, hand-loom products and imports—their relative positions.

¹ In 1913-14, 8·9 million yards and 1 million lbs. of yarn were imported.

of a century we find a substantial change in the relative position of imports and Indian mill products. Thus in 1925-26 imports accounted for 34 per cent. of India's requirements and mill production increased to 40 per cent. With regard to handlooms it is noticeable that there has been an absolute increase in their production from 880 million yards to 1,160 millions but their percentage share has diminished to 26 p.c.¹

The development of the Indian cotton industry may be contrasted with the corresponding development in other countries of the world. The following figures will give an idea of the progress of the Indian industry in contrast with the cotton industry of Great Britain, the United States of America and Japan : —

Year.	India.		Great Britain,		U.S.A.		Japan.	
	Spindles (million).	Looms.	Spindles (million).	Looms.	Spindles (million).	Looms.	Spindles (million).	Looms.
1894	3·6	31,154	45	606,585	16	—	·5	—
1900	4·9	40,124	45·6	648,820	19·4	489,465	1·2	—
1905	5·1	50,139	50·9	704,357	22·8	515,006	1·4	8,140
1910	6·1	82,725	57·7	741,197	28·2	625,719	2	17,702
1915	6·8	110,268	59·9	808,145	32·4	689,840	2·8	30,068
1920	6·7	119,022	60	798,083	34·9	708,079	3·8	50,583
1923	7·9	144,794	56·5	795,244	37·3	744,686	4·8	60,893

It will be evident from the above figures that inspite of the doubling of spindles in India during a quarter of a century their number is one-seventh of that of Great Britain and one-fifth of that of the United States of America. The figures for looms in Great Britain and the United States show also the smallness of the size of the Indian industry. As contrasted with the almost stagnant character of the Lancashire cotton industry the U. S. A. and Japan show a marked advance.

¹ Appendix 4 of the Report of the Tariff Board on the Cotton Textile industry.

The prosperity enjoyed by the Indian cotton mill industry during the war time was, however, short-lived. The world-wide commercial crisis of 1920-21 affected also this industry.

Depression in the industry.

The rapid increase of imports after the war was accompanied by a sharp fall in price. At the same time the Indian millowners had to contend with high costs of production. The increase in the cost of production was due partly to the enormous rise in labour costs and partly to the rise in the price of raw cotton. The situation was so serious that in 1924 the annual bonus to the labourers was discontinued and this resulted in a strike among the labourers which lasted for two months. In 1925 the Bombay millowners proposed a reduction of wages by $11\frac{1}{2}$ p.c. which caused one of the greatest strikes ever witnessed in India. These strikes dislocated the industry so much that relief had to be granted to the industry by the abolition of the cotton excise duty. But even this step did not bring sufficient relief to the industry.

The Bombay millowners complained that the competition of Japanese goods was unusually severe and put forward a claim for a protective duty of $17\frac{1}{2}$ p.c. This demand for protection led to an investigation into the conditions of the industry by a special Tariff Board. The Board pointed out that the depression in the industry was due partly to world causes and partly to internal defects of organisation. It was they thought, the inevitable outcome of the boom of the previous period and as such it had the character of a trade cycle. It was also pointed out by them that the differential change between the prices of agricultural products and manufactured products affected the industry adversely. This means that the prices of manufactured products throughout the world rose in a greater proportion than the prices of agricultural products and this reduced the purchasing power of the Indian consumers. It is, however, to be observed that

though the difference between the two prices has now been considerably reduced yet the industry does not appear to be in a sound financial condition.

The investigation of the Tariff Board brought into light the important fact that the depression was more acute in Bombay than in up-country districts. The increase of production by the up-country mills even during the period of worst depression was marked. The loss of the foreign market for yarns affected the Bombay industry adversely. The mills of Bombay had to face increased competition in the home market with the up-country mills. Over-capitalisation, the defects of internal organisation, *e.g.*, the managing agency system and the high cost of labour greatly accentuated the difficulties of Bombay. The competition of Japan was also an important factor in depressing the prices of Indian yarns.

The future of the Bombay cotton mill industry is, consequently, not bright. If the industry is to retain its position it will be necessary to put the industry on a rational basis. This might be done by reducing the wastes and the evils of mismanagement and increasing the efficiency of labour.

The survey of the growth of cotton industry discloses that there is yet much room for its further expansion. Of the raw cotton produced in the country two-fifths is consumed by mills and three-fifths is exported. There appears to be therefore no scarcity of raw material. But, if the Indian mills are to capture the market dominated by imported goods such raw material is unsuitable for the purpose, for imports consist of finer varieties of goods for which long-staple cotton is indispensable. The future development of the industry must depend upon the capacity of the Indian mills for the production of yarns of higher counts for which India must either import the raw material from abroad or produce it in the country. The difficulties in

Scope for expansion.

Obstacles.

regard to expert labour which were manifest in the early stage have disappeared. Bombay has trained expert labour for running cotton mills and is now in a position to send it wherever it is required. The fuel difficulty was at one time a great handicap in Bombay. Even after the development of railways the despatch of coal from Bengal to Bombay involved considerable cost. But with the inauguration of the Tata Hydro-electric Scheme at Lonavla, the problem of power has well nigh been solved. A large number of mills in Bombay are now driven by electric power supplied from the above station. The up-country centres such as Ahmedabad and Cawnpore have still to suffer the disadvantage arising out of the high cost of power. Though the cotton mill industry in India is more than three

Need for the manufacture of Textile machinery.

quarters of a century old yet its foundation is still insecure. India is dependent upon foreign countries for the supply of textile machinery and mill stores. The risk of such a state of things was manifest during the last war when the supply of textile machinery and mill stores was largely cut off. The need for the development of engineering industry for the manufacture of textile machinery in the country is urgently felt by all who want to see India economically independent. Such a development will supply a fresh outlet for India's capital and enterprise.

Next to the cotton industry in importance and magnitude, is the jute industry. This industry

Jute Industry.

is confined to Bengal as the raw material is produced mainly in this province. In the beginning of the nineteenth century the manufacture of jute cloth and jute gunny was an important industry in Bengal. MacGregor records that the export of jute gunnies from the port of Calcutta to Great Britain commenced in 1832.

Buchanan Hamilton in his account of the jute cultivation of Dinajpur mentioned that large quantities of cloth called *tat* or *chota* were being produced in that district.

Reference has already been made to the interest evinced by the East India Company in jute fibre for its utilisation in the manufacture of cordage and sails for the Company's sailing vessels. About 1820, when flax manufacture was a flourishing Dundee industry, jute fibre was imported into Britain for rope- and cordage-making. It was not long before a Dundee merchant named Nash prevailed on a Dundee firm of flax spinners, Messrs. Bell and Balfour, to experiment in spinning the jute fibre into yarn over their flax machinery. The experiment was, however, unsuccessful due to ignorance of suitable methods for dealing with the fibre and to the unsuitability of the flax machinery of that time to deal with jute. In 1832 Messrs. Balfour and Meldrum by patient and persevering experiments achieved success in power jute-spinning. It was demonstrated that jute might be used as a substitute for hemp. This success was largely a consequence of the use of whale oil to soften the fibre.¹ From that time jute has gained in popularity and the foundation of the Dundee jute-manufacturing industry was laid.

With the progress of the Industrial Revolution, the jute industry received a great impetus. After 1840 the overseas trade of Great Britain in raw materials and foodstuffs began to increase with considerable rapidity. Consequently a great demand for sacking materials grew up, and this demand began to be satisfied both by the handloom products of India² as also the products of the Dundee mills. The Russian War

¹ Watt, *Commercial Products of India*, p. 428.

² Wallace remarks: "In the early forties the cloth came to be exported from Calcutta to North America and the Bombay coast for cotton packing but more extensively as bags for exporting sugar and other produce to all parts of the world."

Wallace, *Romance of Jute*, p. 1.

of 1854-1856 which cut off the supplies of flax, and the cotton famine following upon the American Civil War cleared the way for the development of this industry which has since grown steadily in importance. In a recent report of the Board of Trade we find the observation that " Its prosperity dates from the time of the American Civil War. The war had stopped the cotton supplies which America sent to the Lancashire mills and the utility of jute, which could be cheaply produced, was recognised for many purposes for which cotton has hitherto been used. Dundee took advantage of the favourable opportunity and began its world trade." ¹ With the success of the Dundee jute industry the Indian handloom industry began to decline but the most decisive blow to the handloom industry was given by the establishment of jute mills in India.

The idea of starting jute mills in India originated with George Acland in 1853.

It was suggested to him by a manufacturer of jute and flax machinery that " It would be more practical to take jute machinery to Bengal where the jute comes from and spin it there." ² In 1854 Mr. Acland started the Rishra

Jute mills founded in Calcutta.

Yarn Mills Company near Serampore. In 1857 the Borneo Jute Company started a mill at Barnagore and to it is due the credit for introducing the power loom for the manufacture of jute cloth. These ventures proved so successful that they were shortly followed by other companies. During 1868-72 the five mills that were in existence simply coined money. In 1872-73 five new companies were floated and next year eight more mills were launched. This sudden increase in the number of mills upset the equilibrium of demand and supply with the result that the industry was overtaken by an acute depression. Between 1875-82 there is only one

¹ Report of an enquiry into the cost of living of the working classes, 1906.

² Wallace, Romance of Jute, p. 18.

Depression during
1875-1883.

new mill on record and during the succeeding ten years with the exception of the Calcutta Twist Mill no new mills were added. To bring the industry to a stable basis two courses were followed. In the first place an attempt was made to find out new markets for its products and secondly an attempt was made to reduce supply. In 1877 was opened for the first time the American market for hessian cloth but it was not till 1887 that this market developed. In 1889 the export of gunnies to South American ports commenced. But notwithstanding the opening up of new markets, the industry was in an unsatisfactory condition. With a view to regulate the supply of jute manufactures the Jute Mills Association was founded in 1884, and next year short-time agreement commenced which lasted up till 1891. In 1890 besides short-time working, 10 p.c. of the sacking looms were shut down for a short period. Thus for a period of nearly twenty years the Indian jute industry had a very precarious existence.

A definite tendency towards prosperity, however, manifested after 1894. Between 1896-1900 nineteen mills were started. In 1895 electric light was introduced which permitted the working of longer hours. The development of international trade increased the demand for sacking materials so much that the mills once again found themselves in a secure financial position. The development of the industry may be seen from the following table :

Year.	Number of mills.	Spindles.	Looms.	Number of persons employed.
1879-80 to 1888-84	21	88,000	5,500	38,800
1884-85 to 1888-89	24	138,400	7,000	52,700
1889-90 to 1893-94	26	172,600	8,300	44,300
1894-95 to 1898-99	31	244,800	11,700	86,700
1899-1900 to 1903-04	36	334,600	16,200	114,200
1904-05 to 1908-09	46	510,500	24,800	156,000
1909-10 to 1913-14	60	691,800	33,500	208,000
1917-18	76	884,000	39,700	266,000
1919-20	76	856,800	41,000	280,400
1925-26	86	1,063,700	50,503	331,326

It will be seen from the above figures that the greatest development in the industry took place in the present century the number of mills increasing from 31 to 86 in course of 25 years. The looms and spindles have increased nearly in the same proportion. The employment of labour in the jute industry has increased phenomenally during this period. In the beginning of the century labour employed in jute mills was a little over 100,000 but in 1925-26 the number rose to 331,326, and nearly the whole of this labour force is drawn from the neighbouring provinces. The consumption of raw jute by the industry has continually increased with its expansion. Up to the end of the nineteenth century the mills hardly consumed one-third of the total raw jute produced in the country and the export of raw jute was a more important item of India's trade than the export of manufactured goods. Within a decade of the present century the mill consumption of jute and exports became nearly equal. In another decade the proportion of mill consumption and exports changed to 2 : 1.

The jute mill industry is localised in the suburbs of Calcutta. Out of 86 mills, 82 are located on the banks of the Hooghly. Fifty years back the banks of the Hooghly were either covered with dense vegetation or housed the village population, but to-day they are dotted with smoking chimneys. The main cause of the localisation of this industry around Calcutta is to be sought in the facilities of transportation afforded by the river Hooghly in handling a bulky raw material and its manufactures. Calcutta developed as a market for the export of raw jute and is a convenient centre for the export of manufactured goods to all parts of the world. Besides, the preference of Europeans to remain in Calcutta also partly accounted for its localisation here. So important has the industry become that the industrial life of Calcutta is closely bound up with its fortunes.

Unlike the cotton industry, the jute industry has been built up with Scottish labour and enterprise and British finance. Indians have generally had no share in this industry, except as ordinary labourers. Up to 1891-92 there was a pre-dominance of British capital in the industry. The twenty-six mills that were floated up to that time had a paid-up capital of Rs. 1,37,50,000 plus £1,757,000. By 1903-04 the amount of capital invested in the industry rose to Rs. 4·66 crores plus £2·2 million. In 1916-17 the Industrial Commission estimated that the rupee capital invested in the industry had risen to 13½ crores of rupees but the sterling capital was at the same figure. It is thus manifest that the tendency to float jute mills with British capital is less discernible in the twentieth century than it was in the early period. Indian capitalists have become familiarised with the jute mill shares and rupee capital is being attracted to the industry in a greater degree than before.

No manufacturing industry in India has such a phenomenal development in the export of its products as the jute industry. Half a century ago the value of the exports of jute manufactures was just over Rs. 71 lakhs. Since then each decade has shown a continuous increase in value as will be evident from the following table :—

Value (Crores of rupees).

1876-77	·71
1886-87	1·14
1896-07	5·14
1906-07	15·59
1913-14	28·25
1923-24	42·28
1927-30	51·92

¹ In 1931-32 the rupee capital invested in the industry was 19·70 crores, the sterling capital £2·5 million and American capital \$12 million.

Jute alone accounts for 17·64 p.c. of the total export trade of India. It comes just after the export of raw cotton which accounts for 19·62 p.c. of the total export trade of India.¹

A reference to the destination of jute manufactures discloses that almost all the countries of the world are more or less dependent upon India for their requirements. In spite of the rapid advance in the price of jute there appears to be no tendency towards a reduction of the world demand for jute products. The reason is that there has not been found a material which can bear comparison with it in cheapness. Continental countries like Germany, Italy and France buy mostly raw jute as they have established mills themselves. But countries that are large exporters of cereals, sugar, and wool get their sacking materials supplied from India. Thus Australia, Java, Cuba, Chile and South Africa buy large quantities of gunny cloth and bags from India. The United States of America and the Argentine Republic are the biggest purchasers of hessian cloth. It is worthy of note that no industry in India depends so much on foreign market for its prosperity as the jute industry. Of the total production of bags only 26 p.c. and of cloth only 5 p.c. enter into local consumption, the remainder are exported.²

The last war gave a great impetus to the development of this industry. Though the export of raw jute fell off considerably, the loss was compensated by the tremendous increase in the export of manufactures. The war gave rise to a great demand for jute bags which were used in trench warfare. The rise of price was phenomenal but wages did not rise more than 50 p.c. The consequence was that the industry passed through a period of unprecedented boom. "Mr.

Effects of the Euro-
pean War.

¹ Review of the Trade of India, 1926-27, p. 57.

² Wallace, Romance of Jute (2nd edition), p. 90.

Thomas Johnstone remarked : " In 1925 the reserve funds which have come out of profits amounted to 22 crores and when reserve funds and profits are added together the total gain to the shareholders in the ten years 1915-24 reached the enormous total of £300 million or 90 p.c. per annum on the capital." ¹ The post-war depression in the world's trade and industries affected the industry to some extent but concerted measures adopted by the mills and the huge reserves built up during the war period made the position of the mills impregnable. In 1921 the Jute Mills' Association agreed to work 54 hours per week or 4 days a week, and safeguarded against over-production.² Thus the jute industry of Bengal though neither a cartel of the German type nor a trust of American type is yet able to limit competition amongst themselves. It is not difficult to visualise that the industry may some day consolidate itself into a huge trust to exploit both the home and foreign markets.

Woollen and silk are two other textile industries that deserve mention. These industries have not been revolutionised in the same degree as cotton and jute. They are mostly carried on as handicrafts. "Scattered all over India," says Dr. Watt, "however, more specially in the upper provinces, there are small handloom workshops in woollen manufactures and these employ only one or two hands."³ But large establishments of the factory type are few in number. Throughout the whole of British India only nine mills are found working giving employment to 9,000 operatives. In 1876 the Cawnpore woollen mills were established which were followed by four mills ten years later, of which the most important is the New Egerton Woollen Mill at Dhariwal in the Punjab. These mills manufacture goods of European pattern and

¹ Report on the condition of jute mill labour.

² Review of the Trade, 1926-27, p. 59.

Watt, Commercial Products of India, p. 112.

style such as serges, broadcloths, flannels, tweeds, blankets and travelling rags. The demand for such goods is increasing every year as will be evident from the figures of imports. In 1876-77 the value of imports of woollen goods was only Rs. 54,11,010, but by the end of the century these increased to over $1\frac{1}{2}$ crores. The pre-war average importation exceeded 3 crores and in 1926-27 it amounted to 4.14 crores. The Indian mills satisfy a small portion of the country's demand for fine woollen goods. It is also significant to note that the Indian mills that produce pure woollen goods find themselves hard pressed in their competition with the "attractively got up cheap shoddy and mixed woollen goods" of the continent of Europe for which the demand seems to be continuously on the increase. For the raw material, the industry mainly depends upon home supply. The import of raw wool amounted to nearly 5 million *lbs.* in 1926-27 whereas the quantity of exports was 45 million *lbs.*, so there is still a large margin which can be fabricated into manufactured goods in India.

The Indian silk industry is yet in the domestic stage.

Silk Industry.

The record of the nineteenth century is a continuous decline in its importance. No serious attempt has been made to arrest the decline of the industry by setting up factories. Of the twelve factories existing in the whole of India five are situated in British India and the rest in Indian States. The factories with the exception of the Sassoon and Alliance Silk Company of Bombay are small, employing only a few hundred operatives. These factories are largely dependent upon silk yarns imported from foreign countries specially China and Japan. The import of silk piece-goods has in recent years considerably increased, "the exports have steadily diminished, and what was once a trade of some importance is rapidly approaching insignificance."¹

¹ Review of Trade of India, 1904-05, p. 38.

The manufacture of leather is an indigenous industry of India. The requirements of the rural population for shoes, sandals and water buckets and covering for musical instruments are supplied by the Chamar who occupies a low rank in the village community. Sir Alfred Chatterton thinks that "tanneries of considerable size must have existed to supply harness and saddlery for the irregular troops and retainers which were kept under arms by the numerous Rajahs, Zeminders and petty Chieftains who formerly exercised more or less independent sovereign powers throughout the country."¹ "In the aggregate," says Mr. McWaters, "a very large quantity of leather is tanned in India by village Chamars and in small village tanneries by more or less primitive methods."² The methods followed by the village tanner are extremely crude and inefficient and he has been justly described "as making a good hide into bad leather."³ The continued rise in the price of the raw material is driving him from the industry and in many cases the tanners are becoming the agents for the supply of raw hides to exporters and manufacturers. The export trade in tanned hides and skins is a special feature of the Madras and Bombay Presidencies where small tanneries were established to underake this branch of trade. We find it recorded that as early as 1846-47 Madras exported hides and leather valued at Rs. 6,360 and tanned skins valued at Rs. 18,575.⁴ The location of this industry in Madras is due to the prevalence of the shrub *Cassia auriculata* (Avaram or Turwad) the bark of which is the principal tanning material used in the preparation of hides. The products of these tanneries were half-tanned leather which was

¹ Chatterton, A Monograph on Tanning and Working of Leather in the Madras Presidency, p. 2.

² Review of the Trade in Indian Hides and Skins, p. 27.

³ Report of the Indian Industrial Commission, p. 36.

⁴ Chatterton, A Monograph on Tanning, etc., p. 8.

welcomed by the tanners in Europe as the raw material from which to prepare the very best classes of light leather. Statistics of export trade indicate a gradual development of the industry till nearly the middle of the seventies when various causes operating at the same time led to a very rapid extension. The introduction of public auctions in place of private disposal led to a wide advertisement of the product abroad. After the Franco-Prussian War German tanners commenced buying Indian hides in large quantities. Further, the repeal of the export duty of 3% on skins greatly stimulated the trade. Lastly, the completion of the main trunk lines of railways enabled the Madras tanners to obtain supplies of raw material from greatly extended areas.

Improvements in the indigenous method of tanning were first introduced by a French Eurasian of Pondicherry named Charles de Susa who visited Mauritius some time in the forties and acquired a practical knowledge of the French processes of tanning. He first established a tannery at Pondicherry and subsequently set up several small tanneries in the neighbourhood of Madras. Of his improvements, the most important was the immersion of the tanned skins in a bath of myrabolams after the ordinary tanning had been completed which led to the production of leather that did not show any discoloration when exposed to the sun as was the case with the bark-tanned leather. "With raw materials at a cheap price," says Sir A. Chatterton, "with cheap labour and with the comparatively small capital outlay which was necessary to establish a tannery, it is not surprising that the vastly improved tanned skins found a ready market in Europe."¹

¹ Chatterton, A Monograph on Tanning and Working in Leather in the Madras Presidency, p. 4.

The growth of the export trade in tanned hides and skins may be realised from the following table :—

Year.	Tanned hides (Quantity in Cwt.).
1880-81	62,871
1890-91	98,557
1900-01	254,755
1910-11	151,829
1913-14	174,028
1918-19	568,680
1925-26	369,080

The growth of the modern tanning industry in India is due almost entirely to the efforts of the European methods of tanning. military authorities to obtain suitable supplies of boots and accoutrements. Before the Mutiny saddlery, harness and accoutrements of the East India Company's Army were largely manufactured at Cawnpore by Indian contractors from leather locally tanned. The leather produced by local tanneries was not, however, durable. During the Mutiny the industry greatly suffered as Cawnpore was one of the scenes of that great turmoil. The Government of India consequently had to procure their supplies of leather goods from England. But, the English supply was very irregular in reaching India and was often of very inferior quality.¹ It was also found necessary to keep such a large reserve stock in India that deterioration was inevitable. These difficulties induced the Government of India to make an attempt to obtain suitable equipments locally. The result was the establishment of the Government Harness and Saddlery Factory at Cawnpore in 1867. In this factory were introduced English methods and processes with mechanical appliances. In 1880 Messrs. Cooper Allen & Co., started the Army Boot Factory with

¹ Walton, A Monograph on Tanning and Working in Leather in the United Provinces and Agra, p. 2.

a considerable amount of financial assistance from Government. Thus was laid the foundation of the Cawnpore Leather industry. Cawnpore is in the middle of the best hide-producing area in India, has excellent railway communications and at the outset there were large supplies of *babul* bark,—an excellent tanning material—in close proximity. Besides, the industry has been greatly patronised by Government.

In Bombay an enterprising Khoja Mahomedan Adamjee Peerbhoy established the Western India Army Boot and Equipment Factory. Following this 27 leather tanneries were established in the different parts of Bombay and these give employment to 1,702 operatives.

Up to the end of the nineteenth century hides and skins were tanned mainly with vegetable tannin but the action of various chemicals on hides was being experimented in different countries. About 1895 the production of leather by chromium salt was established on a commercial basis in America. The credit for introducing chrome tanning in India belongs to Madras. The earliest chrome tanning experiments in Madras were made about 1902 by a German firm, Messrs. Carl Simon Soehne, but the results attained were not encouraging.¹ It was contended that climatic difficulties stood in the way of successful introduction of chrome tanning in India. Later on, a Mr. Talhati, a Parsi from Bombay, endeavoured to popularise chrome tanning by demonstration at a small tannery at Tangal, a suburb of Madras but he failed to raise the necessary capital to continue his efforts. In 1903 Mr. Chatterton pointed out to the Madras Government the huge waste involved in the use of country leather for water buckets, used by the raiyats for well irrigation. These leather buckets were so perishable

Introduction of
Chrome Tanning.

¹ Couchman, *Handbook of Commercial Information, Madras, 1916.*

that Mr. Chatterton suggested that experiments should be made to determine whether chrome tanning could be successfully carried on in the Presidency. The experiments conducted in the Government School of Arts proved so successful that the operations of the Government were enlarged on a commercial scale. The activity of the Government on this line was criticised by the various chambers of commerce on the ground of state interference with private trade, with the result that the Government withdrew from the business. But the industry became firmly established in the different parts of India and considerable quantities of chrome leather began to be produced every year.

The introduction of chrome tanning has, however, adversely affected the small tanneries that were engaged in the export of bark-tanned hides and skins. Since 1898 the export of raw skins has seriously affected the volume of the business done in tanned skins and it is impossible to foresee how the spread of chrome tanning in Europe and America will affect the industry in this country.¹ The demand of the foreign tanners for raw hides and skins has increased. Another factor which has encouraged the export of raw hides and skins is the protective tariff imposed on manufactured goods by America and the continental countries of Europe whereas raw products are admitted duty-free. The war supplied a great stimulus to the Indian tanning industry. The demand of the military authorities for leather goods was pressing with the result that there was a great expansion in the tanning of hides in Madras and Bombay for export to the War Office. Local leather manufacturers were also able to take advantage of the reduced imports of certain classes of leather goods from England. One important development of the boom in leather industry was the

¹ Chatterton, *Monograph on Leather* p. 30.

establishment of several new and large tanneries under the management of leading Calcutta firms. With the termination of the war boom the leather industry was faced with a depression like other industries. The future of tanning industry in India is dependent as much upon technical development as upon the expansion of markets. The demand for high class leather is limited owing to its high price and if the Indian market is to be developed greater attention requires to be paid to reduction in the cost of production.

Up to the middle of the nineteenth century the Indian

Sugar Industry.

Sugar industry was expanding and flourishing. The East India Company developed an extensive sugar trade with Great Britain. Thus in 1851 the Indian exports to Great Britain were 1,506,051 cwt. out of a total export of 1,607,508 cwt. During the next decade the exports shrank to 845,961 cwt. Hitherto the East India Company were mostly exporting refined sugar to Great Britain but with the establishment of sugar refineries in that country a great change in the demand took place. The British refineries demanded raw sugar and the consignments became more and more raw sugar. Thus the exports of raw sugar in 1877-78 were 366,997 cwt. but the average for 1882-92 rose to 1,145,685 cwt. thereafter a marked decline took place. Turning to the import side it is worthy of note that in the early seventies the imports amounted to 562,559 cwt, and thereafter every decade showed rapid increase but the increase of imports became phenomenal since the nineties. The progress of imports may be seen from the following table :-

		Value (Crores)
1901-02	278,268 tons	5.9
1906-07	486,585 "	8.7
1911-14	896,869 "	14.29
1921-22	717,600 "	26.78
1926-27	826,900 "	18.37

It is significant to note that sugar is the second largest single article of importation, the first being cotton piece-goods. Thus the two chief items of India's early export trade have been converted now into her greatest imports.

It was in the nineties that the Indian sugar industry found itself considerably embarrassed by the importation of bounty-fed beet sugar from the continental countries of Europe specially Germany and Austria-Hungary. The beet sugar was offered at such a cheap price that the indigenous industry became unprofitable. Many small refineries were closed down and the acreage under sugar-cane considerably shrank.¹ Thus in 1891-92 the area under sugar-cane was 3,100,000 acres but in 1905-06 it fell to 2,110,800 acres. The imposition of the countervailing import duty on bounty-fed sugar in 1899 did not arrest the decline. The causes of the decline therefore must be sought elsewhere. The methods of production pursued by the small refiners of India are extremely wasteful and laborious. In India sugar is manufactured from *gur* but the production of *gur* by indigenous methods is uneconomical. The experiments of Dr. Barnet and Mr. Clark demonstrated that no less than one-fifth of sucrose in juice was lost by the indigenous method of making *gur*. The extraction of juice from cane by primitive types of mills worked by cattle is equally unsatisfactory. Where efficient methods are in use 86·4 per cent. of the original sucrose can be placed upon the market in the form of sugar. But, in India the extraction does not exceed on an average more than 55 per cent. of juice corresponding to about 65½ per cent. of the total sucrose in cane.² The Indian Industrial Commission estimated that of the sugar grown in India roughly one-third was wasted owing to inefficient and primitive methods of extraction. The same view is endorsed

¹ Watt, *Commercial Products of India*.

² Report of the Indian Sugar Committee, pp. 261-62.

by the Sugar Committee when they say that "the present inefficient methods involve an annual loss of 1,068,960 tons of sucrose in the manufacture of *gur* alone. There is a further loss in the manufacture of sugar."¹

The art of sugar-production in foreign countries has made a phenomenal advance in recent years. Not only have the agricultural aspects of the industry been systematically explored with the object of securing better varieties of cane at a cheap price but the manufacturing aspects of the industry have equally been improved. In Java, from which India at present gets more than 66 per cent. of her imports, sugar is produced in large factories direct from cane with the latest appliances under expert chemists. The consequence of these developments is that Java has nearly captured the Indian market.

It is very often thought that in many respects sugar manufacture is eminently suited for the hand labour and small capital of the village communities of India, but Dr. Watt thinks that machinery and chemistry must deprive all such communities of their handicrafts and "the salvation of the Indian sugar-manufacturing industry must be rather looked for in aids towards the establishment and encouragement of power factories." Sugar factories have in recent years been established in India. Of the twenty-two factories existing in India which work either entirely or mainly on cane, ten are located in Bihar, five in the United Provinces and the rest in other provinces. Of the ten refineries working on *gur* five are in the United Provinces, three in Madras, one in Bihar and one in the Punjab. These factories are of small size and their outturn is a little more than "half the outturn of the largest factory of Java and approximately equal to the production of three average factories in that island." In many cases much of the machinery used is of old design

¹ *Ibid.*, p. 268.

and the manufacturing losses are considerable. Nor are these factories adequately supplied with cane.¹ The lack of concentrated cultivation of cane prevents that complete control over cane-supply as is to be found in Java. A sugar factory must be situated in the midst of the tract that supplies it with raw material. Industries like cotton or steel might draw their supplies of raw materials from distant places but the sugar industry must depend on the immediate neighbourhood, for cane cannot be transported long distances without deterioration. The cultivation of sugar on a plantation scale can give the factories an assured supply of cane but there are insuperable difficulties in the purchase of land from small cultivators. It is only in areas which are at present lying waste that any extension of cane cultivation on a plantation scale is feasible. The other line of development is the manufacture of *gur* on an economical basis. There is a large market for the consumption of *gur* but its manufacture requires considerable improvement. It is noteworthy that in recent years the wooden mills for crushing cane have been largely substituted by iron roller mills. But the working of iron mills by bullock power involves such a strain that unless mechanical power is resorted to, cattle is bound to deteriorate. "Under favourable conditions, the output of such mills will rise to 300 pounds of *gur* per hour." Where these small power-driven mills have been introduced, it has been definitely established that they have increased the value of the product from a given area of land by 25 to 30 per cent. It is only in Mysore that such plants have been installed by growers cultivating large areas; others have been installed at State expense

¹ It is found by the Indian Sugar Committee that 50 p.c. of the factories crush half the cane with which their mills are capable of dealing, 20 p.c. crush from two-thirds to three quarters and the remaining 20 p.c. about four-fifths. Vide Report of the Sugar Committee, p. 293.

in places where an adequate supply of cane can be found.¹

Other industries connected with food products which have developed in recent years are rice- and flour-milling. Rice-milling is the principal industry of Burma. But rice mills have been established in Madras and Bengal also and their number is increasing. In 1923, 444 rice mills were recorded in Madras and Bengal giving employment to over 18,000 operatives. Fifty-six flour mills have been established in British India but they are located mainly in the Punjab, the United Provinces and Bengal. The growth of these industries on a large scale aided by mechanical power has profoundly affected the economy of village life. One important consequence of these industries has been that the village women have been deprived of the occupation left to them after the hand-spinning was extinct

Before the European war chemical industries did not develop in India on any considerable scale.
 Chemical Industries. This was partly due to the lack of know-

¹ Appendix C to the Report of the Indian Industrial Commission, p. 51.

The conditions of the Indian industry have greatly changed since the above account was written. In 1932 on the recommendation of the Imperial Council of Agricultural Research, the Government of India adopted a policy of protection to stimulate the development of the Indian sugar industry. The duty imposed on foreign sugar was Rs. 7 and annas 4 per cwt. which with surcharge amounted to Rs 9 and anna 1. The effect of this high duty has been a great expansion of the industry. In the course of four years one hundred and fifty new factories have been established in different parts of India. In 1929-30 the outturn of Indian sugar factories was 110,918 tons which rose to 620,000 tons in 1934-35. The import of foreign sugar during the same period has fallen from 983,600 tons to 222,900 tons. In another quinquennium, the import of foreign sugar will dwindle into insignificance and the country's requirements will be met mainly from home production. But this result will be secured at a considerable sacrifice of the interests of the consumers. The rate of duty on foreign sugar is nearly 180 p. c. *ad valorem* and this duty will be continued till 1947. Unless during this period substantial improvements are made in the technical and agricultural aspects of this industry, it will be difficult for the industry to face world competition. The sugar manufacturers are making substantial profits and a portion of these profits is being appropriated by the Government by an excise duty with a view to make up the loss of revenue from imports.

ledge of the resources of India and partly to the fact that such industries require highly trained technical advisers and skilled labour. Owing to the inadequate development of chemical industries, India has relied on foreign countries for the supply of chemicals, drugs, dyeing and tanning substances and paints and painters' materials of the value of $4\frac{1}{2}$ crores of rupees annually. The dependence of India upon foreign chemicals is a serious weakness of the industrial system of the country. In the industrial countries of the West, the provision of essential chemicals at sufficiently low rates is regarded as a basic condition for the development of larger industries. India possesses raw materials for the manufacture of every conceivable chemical now imported from foreign countries. The location of chemical industries in India will be chiefly influenced by the proximity of cheap coal or coke. The Indian Munitions Board pointed out that Bengal would appear to be the most suitable centre for certain chemical industries owing to its proximity to the coal-fields of India. Certain chemical industries require cheap electricity and the future of these industries would largely be influenced by the possibility of harnessing the hydro-electric resources.

The manufacture of heavy chemicals such as sulphuric, hydrochloric and nitric acids has been undertaken in India but their production is insignificant. Thus the production of sulphuric acid in India is 18,000 tons as contrasted with America's 7 million and Germany's 1,650,000 tons. The production of sulphuric acid is largely hampered because of the dependence on imported sulphur. The Indian Industrial Commission insisted on the local smelting of sulphide ores so as to render sulphur available for the sulphuric acid industry.¹ Various chemicals such as alkalis, sodium carbonate and caustic soda which are essential for many industries such as soap, glass and dye works are imported.

¹ Report of the Indian Industrial Commission, p. 53.

The manufacture of sodium carbonate and caustic soda by the electric process should be undertaken in India. Valuable by-products may be derived if these industries are undertaken. The importance of coal tar in any scheme of chemical industries is evident as it is the raw material from which explosives, dyes, synthetic drugs and phosphoric chemicals are manufactured. India already produces considerable amount of coke from her gas works and coke ovens and experiments in these directions might be undertaken to establish various manufactures.

In India occur many of the raw materials from which scents in the form of volatile and essential oils can be manufactured. But at present the raw products are exported and finished goods imported. The Indian Munitions Board pointed out that the whole subject of essential oil and perfume manufacture deserved much more consideration than it had received.

The exploitation of indigenous resources for the manufacture of drugs requires careful consideration. The Bengal Chemical and Pharmaceutical Works has been popularising the use of indigeneous drugs manufactured after Western methods.

There is considerable scope for the development of chemical industries but the problem is not without its difficulties. Apart from the questions of capital, organisation and expert labour, the dumping of foreign chemicals might destroy a struggling industry during the early years of its inception. The whole problem is consequently complicated by tariff questions.¹

The manufacture of paper in India was carried on a small scale as a cottage industry before the establishment of the mill industry. The product manufactured was crude and was demanded mainly by merchants for their account books.

Paper.

¹ Indian Munitions Board Handbook, 1919.

The production of paper in India by mechanical methods dates from the establishment in 1870 of the Bally mills on the Hooghly. For some time the concern was a success but in 1905 it went into liquidation. In 1882 was floated the Titaghur Mills Company and between 1892 and 1894 a third mill was established at Kankinara. This venture was never successful and was taken over in 1903 by the Titaghur Company. The Bengal Paper Mill at Ranigunj was started in 1889. For about thirty years no other paper mill was started in Bengal. It shows that the paper industry did not hold out sufficient prospects for the capitalists of Bengal. In Upper India and the Deccan the same state of things might be said to have prevailed—the only exception being the Upper India Couper Mills at Lucknow established in 1899. These mills manufactured paper either from rags or sabai grass. They had to depend upon imported chemicals and skilled labour from abroad. Paper produced from sabai grass is of excellent quality but it is difficult for the Indian product to compete with imported paper manufactured largely from wood pulp. During the war two new mills were projected, with the object of manufacturing paper from bamboo of which the supply appeared to be inexhaustible. With the fall in the price of imported paper during the post-war period, the Indian industry was involved in a serious financial difficulty.

Two other industries which have developed in recent years are cement and match.

Before the war India was mainly dependent upon foreign countries, specially Great Britain, for the supply of cement. On the eve of the war three companies were projected for the manufacture of cement. The curtailment of foreign supply during the war and the consequent enormous rise in price made the cement industry highly profitable. The result was that seven new companies were floated in different parts of the country. The development of this industry

and its position in relation to imports may be seen from the following table :

	1914	1918	1921	1924
	Tons	Tons	Tons	Tons
Indian production	945	84,344	132,812	268,764
Imports	165,728	27,177	129,813	124,186

In no industry was development so rapid as in the cement industry within such a short period. The Indian production in 1924 was 59 p.c. greater than pre-war imports. In another decade the quantity of cement produced in India rose to 764,000 tons, whereas the imports fell to 67,300 tons. With the fall in price which commenced in 1922 the industry was overtaken by a great depression. The main cause of the depression was that the supply far exceeded the demand of the up-country markets. In the ports which are the chief consuming centres, competition from the foreign product is acute. If these markets are to be captured by the Indian industry a reduction in railway freight is called for.

Another industry that developed during the war is the match industry. Spasmodic efforts were made even before the war to manufacture matches in India, but these failed partly on account of inexperience and want of technical knowledge and partly on account of foreign competition. The only match factory in India which was successful in maintaining its position before the war was the Gujrat Islam Match Factory in Ahmedabad. But the real development of the industry commenced since the year 1922 when a revenue duty on imported matches was imposed at so high a level as to afford substantial protection to the home industry. Up to 1916 the duty on imported matches was 5 p.c. *ad valorem*. In the same year it was raised to $7\frac{1}{2}$ p.c. and subsequently, in March 1921, it was fixed at 12 annas per gross. In 1922 owing to a serious deficit in the budget, this duty was raised to Re. 1 8 annas. Under the influence of this high revenue duty which varied between 100 to 200

p.c. *ad valorem*, the production of matches in India became profitable. At first splints and veneers on which the increased duty was not leviable were imported from Japan and matches began to be manufactured, and large profits were realised from this business. In 1924 with a view to protect the revenue of the Government, imported splints and veneers were subjected to duties. Thereafter, Indian manufacturers began to exploit the local resources of wood with imported machinery and thus the foundation of an important industry was laid.

The progress of this industry was so phenomenal that the imports declined from 13.68 million gross in 1921-22 to 4 million gross in 1927-28. Indian match factories have now a productive capacity of 18 million gross, excluding the output of cottage factories. The development of this industry clearly illustrates the point which has been emphasised by the Indian publicists so long, that foreign competition is a great obstacle to the development of Indian industries. A judicious application of the tariff may, provided suitable conditions exist, give rise to an industry which would not have developed but for the tariff.

India was dependent upon Japan and Sweden for her imports of matches. With the development of the Indian industry, the import from Japan ceased, but the Swedish Match Company, the largest importer of matches into India "could not afford to stand aside and risk the loss of the whole of the Indian market." The company started six factories in the course of two years in different parts of India. The result of the efforts of this company has been a considerable increase of local supply. But it has raised the important problem of foreign capital in a sheltered market.

We have surveyed the development of large-scale industries in India and the problems with which they are confronted. It is beyond doubt that this development has

been quite incommensurate with the resources available in the country. The future development of Indian industries must not merely take stock of the present position but will also depend in a great measure upon the possibilities of new industries being established in the country.

In Western countries the manufacture of motor cars and bicycles has been established as a profitable industry. In India motor traffic has in recent years made enormous progress but the country depends upon the import of motor cars from foreign countries. Though India grows rubber to the value of a crore of rupees it is exported. It will be to the economic advantage of the country if the manufacture of motor cars and bicycles is encouraged. The development of motor engineering promises a profitable field for the technically trained youths of the country.

Another industry that has made considerable strides in Western countries is artificial silk. Large and increasing quantities of artificial silk are being imported every year which are being used by the Indian mills and handlooms. The possibility of this industry requires a thorough examination before an attempt can be made in this direction. India imports annually a large variety of toys from Japan and Germany. The manufacture of these articles is not a difficult process and Indian artisans are not lacking in designs and workmanship but yet little attempt has been made to develop this industry in the country.

The import of different varieties of glass and glass articles is considerable. Though some factories have been established in the country, the products manufactured are inferior to foreign articles. The country does not lack in the supply of necessary raw materials but yet the industry does not seem to progress. The technical problems connected with the industry require to be solved by research and experiments and there appears to be no reason why this industry should not develop under expert management.

The scope of the different varieties of engineering industry requires a thorough examination. India cannot remain, for all the time to come, dependent upon foreign countries for the supply of machinery of different kinds for her growing industries. The problem of the development of machine industry is not without its difficulty. The industry may be exposed to foreign competition in the beginning and may require to be protected by tariffs. But the imposition of a protective duty on imported machines will place other industries in a difficult position. These difficulties however must be faced if the machine industry is to be developed in the country.

The development of shipbuilding industry has aroused considerable interest in the country in recent years. The average value of India's foreign trade is nearly Rs. 700 crores, and this vast trade is carried in foreign ships. Even the coastal trade of India which is by no means inconsiderable is carried mostly in British ships. It was pointed out before the Indian Mercantile Marine Committee that 90 p.c. of India's coastal trade and 98 p.c. of her import and export trade are served by ships which are owned by non-Indian Companies. This situation involves the country in a serious economic loss. No modern industrial and commercial country considers its position safe unless it can possess a mercantile marine of its own.

The problem of the development of an Indian mercantile marine must depend upon three considerations. In the first place it involves the training of Indians as marine engineers and officers capable of commanding ships. Secondly the reservation of the coastal traffic to national ships, and thirdly the establishment of the shipbuilding industry within the country. It has been urged by Indians that the reservation of coastal traffic to national ships is an accepted policy of many countries including the Dominions and there is no reason why India should be denied

this right. The British Companies regard this policy as an instrument of discrimination or expropriation. It is pointed by Indians that the deferred rebate system and rate wars have prevented the entry of Indian shipping companies into the coastal trade and if capital is to be attracted into this line of business the coastal trade should be guaranteed to Indian companies with a view to inspire confidence.

The development of a national mercantile marine leads as a corollary to the establishment of ship-building industry. It is true that in the initial stage, a country has developed its mercantile marine by the purchase of ships from other countries but it has later on developed its own ship-building yard. With the development of iron and steel industry in the country the problem of ship-building has assumed an important phase. But it is to be noted that without adequate encouragement either as construction bounties or navigation bounties there is hardly any prospect of the new industry coming into existence. It is urged by many influential Indians that Government should pioneer this enterprise and establish and maintain a ship-building yard at its own cost.¹ The Mercantile Marine Committee have however suggested that Government may aid the enterprise by (a) advancing a cheap loan to the extent of the paid-up capital of a company and assistance in acquiring suitable sites ; (b) guaranteeing all Government and Port Trust work, and (c) legislating that, when such a suitable ship-building yard is completed, all ships seeking for a license on the coast should also be required to have been built in India.¹ But no step has yet been taken to establish ship-building industry in the country on a large scale.

¹ Report of the Indian Mercantile Marine Committee, p. 87.

CHAPTER VI

INDUSTRIAL LABOUR

The development of large-scale industries in India has been accompanied as in other countries by a drift of labour from rural areas to industrial centres. The decline of handicrafts and the pressure of population upon land set free a certain amount of labour for employment in factories. This exodus of labour has by no means been so rapid as in the countries that have undergone an industrial revolution. In the second half of the nineteenth century the

Growth of Factory
Labour in India. growth of factory population was very slow. It is only in the first quarter of

the present century that we meet with an abrupt growth of factory labour due to a general stimulus to industrial development.¹ In addition to labour employed in factories, the mining industry affords employment to 20 lakhs of labourers. It may roughly be said that factory industries give employment to nearly two million labourers out of a total population of 240 million in British India. Industrialism thus occupies a small patch in the economic map of India and it is only in a few centres that the activities of industrial life occur. In these centres there are signs that the country is in the throes of an industrial revolution but the economic life of the people in general may be said to be primarily agrarian in character.

¹ The total number of factory labourers in 1890 was 316,816 which rose to 1,404,968 in 1925. *Vide* Statistical Abstract for British India, 1916-17 to 1925-26, p. 639.

Distribution of
Industrial labour.

The Industrial labour of India is distributed among the various industries as follows : ¹

Cotton Spinning and Weaving	...	...	...	860,600
Jute mills	...	...	...	829,700
Cotton Gins and Presses	...	...	...	165,000
Railway and Tramway Works	...	...	...	146,500
Engineering Workshops	...	...	...	96,000
Rice Mills	.	...	...	59,000
Tea Factories	...	...	...	51,700
Jute Presses	..	...	...	81,500
Sugar Factories	...	...	...	13,700
Oil Mills	...	...	...	12,600
Woolen Mills	..	...	...	11,700
Tanneries and Leather Works	...	...	...	10,000
Metal Works	...	...	.	9,000
Tobacco Factories	..	...	...	6,500
Cement Works	...	...	...	6,400
Flour Mills	...	...	...	5,400
Paper Mills	...	...	...	5,800

A reference to the above figures discloses the fact that the two staple industries cotton and jute give employment to nearly half the total factory labour in India. Though a variety of other industries has been established, their importance from the point of view of employment of labour is small.

The labouring population in India is usually of a migratory character. The Factory Commission of 1907 have pointed out that Indian industrial labour is recruited mostly from the agricultural class. "The Indian factory labour," says the Commission of 1907, "is at heart an agriculturist" and it is sheer necessity that compels him

Character and composition of labour supply.

¹ Large Industrial Establishments of India, 1928.

to take up work in factories.¹ He usually leaves his wife and children in his village home to which he returns every year for a few months. Even when he is accompanied by his family he pays occasional visits to his native place. The approach of the monsoon is accompanied by a movement of labourers from industrial centres to villages where their assistance is needed for agricultural operations. The consequence of this agricultural connection is that industrial centres in India depend upon a fluctuating labour population.

In Western countries industrial centres depend for the supply of labour upon a resident population either of the town or the suburbs but in India a permanent class of factory operatives is rare. In certain centres, as in Cawnpore and Ahmedabad, a permanent class of industrial operatives is growing up. But in centres like Bombay and Calcutta, the immigrant population forms the bulk of the labour supply. In Bombay the birth-places of 84 per cent. of the inhabitants were outside the city.² In the jute mills of Bengal 80 per cent. of labour are drawn from the neighbouring provinces. In the mill towns adjoining Calcutta there is continually an excess of immigration over emigration. The development of transportation facilities has rendered the labour force mobile and it is now easier than before to draw from distant districts and provinces, labour required for industries. In Bombay city over 70% of the factory population belong to the province. Ratnagiri district is the chief source of Bombay's labour supply. The density of

¹ Report of the Indian Factory Commission, 1907.

"The truth behind the assertion of the agricultural character of the factory population—and it is a truth of primary importance—is that the great majority of those employed are at heart villagers; they have had in most cases a village upbringing, they have village traditions and they retain some contact with the villages. This does not necessarily mean that they are all drawn from agricultural classes.....But agriculture has naturally supplied the bulk of the recently established industrial population."—Report of the Royal Commission on Indian Labour, p. 12.

² Bombay Census Report, 1921.

population of this district is 694 per square mile and the people depend on a precarious crop. The following table will give an idea of the sources of Bombay's labour supply :

Bombay city born	10%	Poona	7%
Ratnagiri	41%	Kolaba	5%
Satara	8%	United Provinces	11%

The pressure of population on the soil in the United Provinces is so great that it compels increasing numbers to seek employment in the industrial regions of India as weavers in the cotton mills, artisans in the Engineering works and dockyards, coachmen and coolies. "The competition of machine-made fabrics has adversely affected the handloom industry of the United Provinces with the result that many 'Julahs,' the hereditary weavers of Jaunpur, have migrated semi-permanently to the cotton mills."¹ The districts of the United Provinces from which Bombay mostly draws labour are Jaunpur, Allahabad, Azamgarh, Lucknow, Partabgarh, Rai Bareilly and Benares. The Punjab also supplies Bombay with weavers, mechanics and blacksmiths. The remainder come largely from Baroda territory, Hyderabad and the Central Provinces. In Ahmedabad centre 60 per cent. of the population were actually born in Ahmedabad, about 23 per cent. are immigrants from other parts of India, the remainder coming from adjacent districts and from Bombay States and Agencies. In Sholapur 64 per cent. of the population were actually born in Sholapur itself and only 27 per cent. came from outside the province.

The United Provinces do not support a large industrial population. These provinces are not dependent on outside provinces for the supply of their industrial labour. There is also no immigration of labour from the neighbouring provinces

¹ Burnett Hurst, *Labour and Housing in Bombay*, p. 13.

into Madras. The province being mainly agricultural sends its surplus agricultural population to the neighbouring provinces. In the Census of 1921 no less than 1,731,000 Madrasis were enumerated in other parts of India or in countries beyond India. As Dr. Broughton says, "The large numbers of landless agricultural labourers form a mobile force with a low standard of living. It competes on easy terms with local labour outside the province."¹ There is very little imported labour in the Punjab. Over 80 per cent. of those employed in factories either belong to the district in which they are working or have come from adjacent parts. Among the immigrants the largest number come from the United Provinces and they are to be found principally in the railway workshops or in the cotton spinning and weaving industries.

No industrial Province in India is more dependent on neighbouring provinces for its labour supply as Bengal. Of the skilled labour employed in the various industries of Bengal 39 per cent. and of the unskilled labour approximately 30 per cent. are local. In 1906 Mr. Foley reported that 29 years earlier all the hands in jute mills were Bengalis but at the date of the report two-thirds of them were immigrants.² In 1916 a census taken by the managing agents of seven mills in Garulia, Bhadreswar and Titaghur showed that the Bengali workers formed only 10 per cent. of the total labour force.³ It is significant that there were 350,000 more immigrants in 1911 than in 1901, in Calcutta, the 24-Perganas, Howrah, and Hooghly. In the 24-Perganas, the number of immigrants had increased by 176,000 or 80 per cent. during the same period.⁴ Unskilled labour

¹ Broughton, *Labour in India*.

² *Report on Labour Supply in Bengal*.

³ *Report of the Indian Industrial Commission*, p. 11.

⁴ *Ibid*, p. 11.

is drawn largely from the provinces of Behar and the U.P. which supply 17 and 11½ per cent., respectively. Of the skilled labour, the U.P. contribute 20 per cent. while the proportion of skilled and unskilled labour that comes from Madras is equal being only 2·3 per cent.¹

In the industrial organisation of India caste principally determines the occupation and the social status of a man. In the rural areas the rigidity of the caste system still to a large extent determines the social framework. But the growth of capitalistic industries has largely broken down the barriers of castes. The long period of apprenticeship to learn a hereditary craft is no longer necessary for employment in factories. Machine production demands labour of general intelligence and an operative can pick up the work of attending to machinery in the course of a few months. The consequence has been that factories have thrown open the avenues of employment to all classes of people whether they had any training in the craft or not. A reference to the castes of labourers employed in the cotton mills of Bombay shows that they belong primarily to the class known as untouchables or the depressed class. The Marathas, Dheds and Mahars, Chamars and Mochis are mostly employed in mills. Amongst the Mohamedans Sheiks and Julahs find employment in mills. In the United Provinces the principal castes that seek employment are the Chamars, Koris, Ahirs, Kurmis, Dosbads and Lohars. The Mussalmans are usually found in the textile industry as weavers. Some of these castes belong to the old artisan classes who have to some extent been absorbed in the new industries, but the bulk of the labourers have been drawn from the agricultural class.

In the mining industry of Bengal and Bihar and in the tea gardens, labour is drawn principally from primitive

¹ Census Report, Vol. V, Pt. II.

aboriginal tribes while factory employment attracts settled population. The mining labourers in India combine work in mines with agricultural work. They come to mines for a certain number of days each month and spend the remainder of their time in agricultural work. Where it has been found possible to give the labourers plots of land for cultivation they settle in the mining area. But the bulk of the labour force in the mines constantly change.

The migratory habits of industrial labour in India raise important questions relating to their standard of living, efficiency and housing conditions. The frequent change of the personnel of the labour force brings in its train two important direct consequences. In the first place it affects greatly the composition of the labour force. In Western countries the male and female are almost equally employed in factories and there is also a large demand for the labour of children, though the proportion might differ in different industries. But, in India the percentage of women and children to the total factory population is considerably less. Women form about one quarter of the daily average workers in jute mills and about one-fifth in cotton mills. In Bombay the disparity of sexes in industrial towns is a direct consequence of migratory habits. The social conditions amidst which the Indians live in villages render it difficult for them in many cases to bring their womenfolk with them to the factories. It is only the lower classes that do not observe the *purdah* system that bring their wives with them. The Madrasis and Biharis are usually accompanied by their women, but the Oriyas and Bengalis will not under any circumstances bring their women with them. Amongst the Mohamedans who observe a strict *purdah* system the proportion of women is still less. This disparity of sexes is an important cause of the frequent change of labour force. And it is in no small degree responsible

Effects of migratory habits.

for the immoral habits which we notice amongst the factory operatives.¹

Another incidental difficulty of the employment of migratory labour arises out of the intermittent supply of labour. The mill-owners' general complaint is that they have to employ a larger number of operatives than they would have done if the supply of labour had been constant. The percentage of absenteeism in the attendance of labour in the mills of Bombay has been estimated by Mr. Engles, Chief Inspector of Factories, at about 20 p. c. of the regular staff and this figure rises considerably in the summer months. This absenteeism is however partly to be accounted for by the fact that the labourers seek to relieve the strain involved in continuous labour in unfavourable climatic conditions by temporary migration to villages. Thus, in Cawnpore and Delhi it is a common experience that in the summer it is difficult for the mill authorities to keep the full strength of labour supply.

A very important characteristic of the labour supply in the mills is that amongst the adult operatives a large majority are below forty. It is asserted by the factory operatives that the strain involved in the work is so great as to preclude the employment of older people. Men and women in the prime of their life are employed in factories. The explanation of the mill authorities that industrial labourers

¹ The number of women per 1,000 males in the more important industrial cities, in 1921 and 1931, was as follows :—

	1921	1931		1921	1931
Calcutta and Suburbs	500	475	Delhi	672	674
Bombay	524	553	Ahmedabad	763	—
Karachi	629	607	Nagpur	864	862
Cawnpore	667	695	Bhopalpur	894	880
			Madras	908	890

after they have accumulated a fortune settle permanently in villages and do not come back to factories for work is hardly borne out by facts. It is a myth to suppose that the labourers save a sufficient amount from their scanty wages to enable them to settle permanently on their lands.

These considerations relating to the supply of labour bring to the forefront the question of the efficiency of Indian labour. The Indian Industrial Commission pointed out "Indian labour in organised industries is much less efficient than the corresponding classes of labour in Western countries"; and there is evidence to show that in many cases it does not produce as cheaply as Western labour, inspite of its lower wages."¹ Sir Stanley Reed holds that "The chief consequences of the incessant migration, are a low standard of technical efficiency, an absence of responsibility arising from the treatment of factory labour as a disagreeable necessity."² The millowners in India declare emphatically that the operatives in India are extremely inefficient. Mr. Johnson, an industrialist of Cawnpore, remarked: "The greatest disability which affects Indian industries is the poor quality of Indian labour. A power-loom weaver in Lancashire works single-handed from four to six looms and will turn out from each loom an average of 78 lbs. of coarse cloth in a week of fifty-five working hours or 468 lbs. in all for a six-loom worker. A power loom weaver in Northern India looks after as a rule only one loom and can turn out at the best 70 lbs. The difference is due entirely to the quality of labour."³ The factory commission of 1907, holds the same view. "At the present time," says the Commission, "according to the very careful calculations made by Mr. Simpson

¹ Report of the Indian Industrial Commission, p. 179.

² Stanley Reed, Foreword to Burnet Hurst's Labour and Housing in Bombay.

³ Johnson, Paper read at the Benares Industrial Conference, 1905.

of Messrs. Binny and Company, Madras, a cotton mill in Madras with 3,500 ring spindles, 80 looms, average count 16 working 67 hours a week would employ 2,622 operatives all told. Whereas for a similar mill in Lancashire working $54\frac{1}{2}$ hours a week, the total number of hands required would be 982, which works out a proportion of 2.62 Indian hands to 1 English hand.”¹ Mr. Ainscough, British Trade Commissioner in India expresses himself on this question as follows: “I am informed that in Cawnpore nine men are still required to work a pair of mules of 800 spindles, whereas, it is said, only three would be necessary in a Lancashire mill. A Lancashire weaver usually minds four looms by himself or six with the assistance of a boy or girl, whereas in India about 50 per cent. of the weavers will only mind one loom, and in no case has any weaver been known to attend to more than two looms.”² “My own opinion,” says the writer further, “is that before the war, taking all factors into consideration, Indian labour was in most cases, despite its low wages, less economical than British labour, and in addition the quality of labour was undoubtedly poorer.”³ This is the general view about the efficiency of Indian labour and it is pointed out that the effectiveness of labour is so low that the advantage of lower wages is counteracted by smaller productivity and higher costs. Any comparison between the efficiency of labour in one country with that of another is, of course, often vitiated by the fact that the conditions of employment are by no means the same. But, even when we assume equal conditions, there may be still differences which cannot be equalised. There is no doubt about the fact that climatic conditions contribute to a great extent to this difference in efficiency. The tropical climate is unsuitable for strenuous

¹ Report of the Indian Factory Commission of 1907.

² Ainscough, Report on the Conditions and Prospects of British Trade in India at the Close of the War, p. 87.

³ *Ibid*, p. 113.

and continuous work and the operatives are inclined to spread their work over longer hours so as to avoid the effects of fatigue. The inferior physique of the operatives in a tropical country which is to be attributed to climate is another cause which contributes to inefficiency. Apart from differences in efficiency due to the climatic factor there is still a considerable margin which requires explanation. Conditions of employment so far as they relate to raw materials and machinery, may cause wide divergences in the efficiency of labour.

The cotton mill operatives of Bombay as early as 1884 pointed out in a petition that their low output was due in a large measure to the bad raw material and old and antiquated machinery which they had to use in their work. Breakages of yarns in the processes of spinning and weaving were so frequent on account of the poor quality of the raw material that their work was largely interrupted. One of the reasons for the movement of labour from an old to a new factory is alleged to be better machinery. Therefore, in comparing the relative efficiency of Indian and British labour these conditions must be taken into account before expressing a definite opinion upon the efficiency of Indian labour. There are, however, certain factors which apply to Indian labour as a class and which are responsible for a considerable degree of the inefficiency complained of. It has been mentioned that frequent changes of the labour force are a direct cause of inefficiency. Even in mill work an operative cannot obtain efficiency unless he has worked for a fairly long time and has got himself accustomed to factory processes, factory life and factory discipline. Efficiency can be obtained by a permanent corps of labour force which have taken up factory work as the sole means of their livelihood and have imbibed the traditions of work which can be transmitted to their children.¹

¹ The Royal Commission on Indian Labour, however, dissent from this view. They recognise the disadvantages that accompany the system of migration from the

The low standard of comfort of the Indian operatives is regarded as another contributory cause of inefficiency. The Indian Industrial Commission point out that "All authorities who are qualified to speak on the subject agree that Indian Labour is content with a very low standard of comfort."¹ It is asserted by the employers of labour that if wages are just sufficient to secure the labourers their requisite standard of living, they will work less even if their earning power increases. It is a frequent complaint made by the coal industry that the increased rate of earnings is invariably followed by a smaller number of working days. In Bombay, it was stated by many witnesses before the Industrial Commission that in 1917 after a ten per cent. increase in the wages of the operatives there was an actual falling off in the output.² It has been urged generally that

point of view of efficiency but have emphasised the fact that the maintenance of connection with the villages is an "asset of incalculable value." "The combination of urban and rural life brings a width of outlook which is apt to be lacking in a purely urban population. Further, the villages usually provide a measure of insurance against the effects of various changes which may reduce the earning capacity of the worker. The industrial workers help to diffuse throughout the countryside, not merely their knowledge of a wider world, but a conception of liberty and of independence that is new to village society. Industry must depend for a long time on villages and the general aim should be not to undermine the link with the village but to encourage it and as far as possible regularise it. We believe that, at the present stage, it is not advisable, that this striking feature which marked the beginnings of Indian industry, and has shown such persistence during its steady advance, should be discouraged."—Report of the Royal Commission in Indian Labour, p. 20.

¹ Report of the Indian Industrial Commission, p. 179.

² *Ibid.*

This view seems to be incorrect. If it were true, it would be impossible to raise the workers' standard of living except by coercion. "The evidence of unprejudiced observers regarding improvement in the general standard of living and the increase in the level of real wages show that the workers' earnings have risen, i.e., the idea of any general fixed standard is fallacious.....As the standard of comfort is improved, there is an intelligible and reasonable tendency to secure some increase in leisure at the expense of part of the possible increase in income."—Report of the Royal Commission on Indian Labour, p. 209.

an improvement in the standard of living is urgently called for if we have to expect greater efficiency of the operatives. The standard of living of a class of people can be raised if their outlook of life can be broadened, and if there is a better appreciation of the social opportunities open to them. This change in the outlook of the labourers can be brought about through education and moral teaching. The great mass of Indian labour is generally illiterate. The percentage of people that are recorded as literate according to the census standard is barely 7 per cent. It has been pointed out that machinery demands labour of general intelligence and this intelligence can be increased by means of education only. The operatives very often find it difficult to follow the instructions of the European foremen and a considerable part of the difficulty in industrial management would have been remedied if the employers had been supplied with intelligent labour. Apart from the development of general intelligence there is an urgent need for the improvement of technically trained labour who may be employed in supervision or high-grade work. The problem of the improvement of labour ultimately hinges largely on the problem of affording suitable types of education.

Considerable emphasis has been laid on this point by the Industrial Commission. "Looking forward as we do to a very great industrial expansion in the immediate future, we think that the present arrangements for the training of artisans are totally inadequate, and that it is essential that steps should be taken as early as possible to provide a much better training for many more boys." ¹ It is doubtful, if sufficient inducements in the way of pay are held out to men to become really first class artisans. Any means of raising the self-respect and social status of the artisan, will benefit in the long run, will benefit the employer no less

than the employed. Public opinion in India has been largely aroused to the supreme need of making the facilities for education available to the operatives. It was often thought that the provision of facilities for education is a part of the duty of the employers to their labour force but no industrial country has imposed this responsibility upon the employers alone. Education is a social necessity and it is now regarded as the duty of the society to see to the uplift of its members. During the last decade legislation has been passed, notably in Bombay and Bengal, to make primary education compulsory within municipal limits. Financial difficulties of the post-war period have prevented the attainment of any appreciable progress in this division.

“No industrial edifice can be permanent, which is built on such unsound foundations as those afforded by Indian labour under its present conditions.” This remark is made by the Indian Industrial Commission in connection with the conditions under which the Indian operatives are housed. In the industrial centres of India nothing is cheaper than human material and nothing dearer than sanitary conditions of living. The growth of industrial towns in India has been accompanied by similar overcrowding and congestion as was found in western countries in the early stages of their industrialisation. During recent years the population of the important industrial towns of India has increased at an unexampled rate, as will be seen from the following table :

	Population in 1921.	Percentage of variation. 1911-1921. 1872-1921		No of persons per sq. mile in 1921.
Calcutta with suburbs	1,827,547	4·3	...	21,412
Bombay	175,914	20·1	82·5	48,996
Ahmedabad	274,007	17·7	113·2	24,909
Cawnpore	216,486	21·8	71·9	22,620
Nagpur	145,193	48·2	71·9	7,259
Sholapur	119,581	94·9	128·9	7,0881
Amritsar	160,216	4·9	5·5	16,021

The increasing number of people in industrial towns has made the problem of housing serious enough to attract the attention of the sociologists. It is true that the degree of acuteness of the problem is not the same everywhere, but it is a problem of considerable importance upon whose solution depends the healthy growth of the industrial life of the country. The conditions under which the bulk of the industrial population live are beyond description. In the rural areas from which the labouring population is drawn, the environment, though different from what obtains in the town, is adapted to the social tradition and conception of life of the workers. Though the nature of dwellings in which the workers are accustomed to live in villages is not superior to that provided in towns, yet, in many respects, the houses provided for the workers fail to satisfy their social needs. The high cost of land in towns compels the landlords to get the maximum economic return out of it. In many cases these landlords are the sardars or recruiting agents of the mills who buy or take on lease land from the proprietors and build *cutchas* houses on it in rows or blocks with a small verandah. The interior of such houses is damp, ill-lighted and ill-ventilated. In many cases there is no other entrance for the admission of light and air except the door. Food is cooked either in the verandah or in the room where the operatives live. There is no privacy of family life in such surroundings. The husband, wife and elderly children and often the aged parents live in the same room and a screen hung in the centre of the room provides an apology for privacy. I noticed at Goaltooly and Khalasipara in Cawnpore a state of things which would shock the sense of decency of average men. Godowns have been converted into residential dwellings without any regard for the conditions of health and comfort. It is notorious that in some of the houses goats and chickens are found accommodated in the same room with the

labourers. The sanitary conditions of the dwellings of workmen defy description. Dirt and filth are allowed to accumulate in heaps and the approaches to such quarters are nauseating. Of all the places, the conditions prevalent in Bombay are most appalling and in recent years attempts have been made to remedy the difficulties of housing in that place. In Bombay not only the textile operatives but dock and godown labourers, employees of the railway and public bodies, and cooly labour generally live under precisely the same conditions. The majority of the working classes in Bombay are housed in chawls or buildings let in separate tenements. The chawl consists of a two, three or four-storeyed building with single-room units either placed back to back or separated by a narrow gully two or three feet wide usually traversed by an open drain. The rooms, especially those on the ground floor, are often pitch dark and possess, as a rule, one window 2 ft. by 3 ft. which is closed by the occupiers in their desire to secure privacy. The ground floors are usually damp owing to an insufficient plinth, the courtyards between the buildings are undesirably narrow and therefore receive insufficient sun and air. Dwelling houses originally built for one family have been extended or converted into tenements. The approaches to the chawls abound with dirt and filth. Household refuse and even human excreta are thrown from the windows of the upper floors on the street and into the compounds. The compound and the approaches to the chawls during the monsoon season are veritable quagmires with pools of water. The chawls have common bathing places used by both sexes. In the bathing places not only do the tenants take their baths, but they also wash their clothes and utensils and collect water for drinking and cooking purposes. The Industrial Commission pointed out that the chawls of the worst type did not constitute more than ten per cent. of the whole although many of the remainder were distinctly insanitary.

The extent of overcrowding in the tenements provided for the workers is appalling. In Bombay

Overcrowding. 66 per cent. of the total population live in single-roomed tenements. Of the working classes about 97 per cent. are housed in single rooms, and the average number of persons per room is 4·03. It is also found that a single room is occupied by several families. According to the census of 1921 there were in Bombay no less than 135 instances in which a single room was occupied by 6 families or more. It is pointed out by the Industrial Commission that the labouring population of India seldom regard the payment of rent as a part of their normal expenditure and they very often reduce the share of rent by taking in lodgers or boarders. The percentage of persons living in rooms occupied by 6 to 9 and 10 to 19 persons is 22·1 and 10·8 respectively.

In Cawnpore 64 per cent. of the population occupy one-roomed tenements. In Goaltooly and Khalasipara, the two important labour quarters of Cawnpore, the extent of overcrowding is beyond description. The average number of persons in a single room exceeds 5. In Ahmedabad conditions are better than those in Bombay, the average number both of one-roomed tenements and occupants per room being less. In the jute mill areas of Bengal, the bulk of the labouring population are housed in busties or dwellings specially constructed for the purpose of housing these people. The degree of overcrowding in these busties has not been ascertained by any inquiry, but the impression on personal investigation is that they are also overcrowded. The houses occupied by the Ooriyas are densely congested because they try as best as they can to economise their expenditure on this account. Dr. Curjil, in her investigation into the conditions of woman labour in Bengal, observed : " The average number supposed to occupy a one-roomed house was four adults but managers said they had on

occasion found as many as eleven to sixteen persons occupying one room." ¹ One of the effects of this terrible

Infantile mortality.

overcrowding in insanitary dwellings has been an appalling infantile mortality. The rates of infantile mortality in the slum areas of Bombay and Calcutta are 760 and 700 per 1,000 births.² In 1920 it was found in Bombay that the average rates of infantile mortality in one-roomed and two-roomed tenements were 63·11 and 30·40 respectively.³ About infantile mortality in the Jute Mill areas of Bengal Dr. Curjil writes : " Owing to the fluctuating character of much of the labour employed in jute mills there are no records obtainable from which the number of children born to women workers during one year might be calculated. Individual inquiries among 132 women workers showed that 102 had had among them 338 children born alive, 139 of whom had been born while the mother was actually engaged in industrial work and of these children 91 were alive to date." ⁴ It is evident that the death rate among infants born while the mother is engaged in mill work is high, even in comparison with the known high death rate among infants in and around Calcutta.

The need for suitable housing accommodation for the labouring class has been recognised in recent years by enlightened employers and public opinion has also been aroused to the gravity of this problem. It is appreciated by many employers that the future of Indian industries rests largely on a happy, contented and stable labour force. Among the factors that will determine the location of mills and factories in future, the adequacy of housing accommodation for the labourers must be kept in the forefront if some of

Housing arranged
by employers.

¹ D. F. Curjil, *Womens' Labour in Bengal Industries*, p. 15.

² The figure for the whole of Bombay was 667 in 1921.

³ Dr. R. K. Mookerjee, *Civics*, pp. 150-51.

⁴ *Ibid*, p. 21.

the evils of industrialism are to be avoided. Where land is cheap such as the mill areas of Bengal and Ahmedabad, the employers have tried to provide accommodation for their labour force. It is believed that about one third of the imported labour in Bengal is housed by the employers. Great difficulty is, however, experienced in some cases in obtaining a clear title to the land and in coming to terms with the numerous small interests held therein by various classes of individual owners and tenants.¹ Housing of labour is not regarded by the employers as a sound commercial proposition from the point of view of investment of capital, for houses are let at a rate much below the economic rent. The rent charged by mill authorities for a one-roomed house varies from annas eight to Re. 1 per month. "Much of the housing which has been erected by mill authorities is not satisfactory from a sanitary standpoint. Some of the mills are continuing to erect lines of a bad and insanitary type, rooms being placed in a line back to back and with no proper arrangements for ventilation, the worst features being evident in houses which are double-storeyed.² The inadequacy of latrine arrangements which are provided at a considerable distance from the quarters is a frequent complaint made by the workers. In Cawnpore two of the large European factories have provided their operatives with suitable accommodation in their labour settlements—Mac-Robertganj and

¹ Report of the Indian Industrial Commission, p. 192. The Indian Industrial Commission recommended that the local Government should acquire land compulsorily from private persons on behalf of an industrial concern, if certain conditions were satisfied.

The Royal Commission on Indian Labour also endorsed this view—"We consider that, where employers are willing to construct houses for employees, they should be assisted by Government to acquire the necessary building land, provided that the schemes have the approval of the Ministry of Health. We therefore recommend that the Land Acquisition Act be so amended as to provide that the housing of labour shall be deemed to be a work likely to prove useful to the public." Report, p. 291.

² Qurjil, *Womens' Labour in Bengal Industries*.

Allenganj named after their founders. There are spacious compounds and adequate arrangements for drainage and supply of water. There are two schools—one for boys and the other for girls in which education is free. There are hospitals within the compound and also play grounds for the recreation of the operatives. The rates of rent are—single room Rs. 2, double rooms Rs. 5-10-0 and Rs. 9-8-0 and in the latter case the rooms are of a better type with a courtyard and a latrine. The increased value of land during the war period has greatly prevented the progress of housing by the mill authorities.

It has been pointed out that nowhere is the problem of housing industrial labour so acute as in Bombay. The mills are mostly located in the city and the large railway and engineering workshops are also accommodated there. The demand for housing became more pressing during 1914-1921 when there was an increase of 40 per cent. in the number of textile operatives in Bombay city and island. The high cost of land prevents an employer, however enlightened he may be, to undertake the financial responsibility for the construction of workmens' dwellings. Even where the mill authorities provided accommodation, there was no guarantee that the operatives would work in the mills that undertook the financial responsibility. The Industrial Commission recorded in their report that "striking instances of this were brought to our notice in the case of two mills, where only 57 per cent. of persons using the accommodation provided by the mills worked in those mills." "It has very often been urged that the responsibility for the housing of industrial labour should devolve upon the employers but against this there is the objection that in no country have employers been compelled by law to provide housing for their operatives. It is, further, pointed out that to impose on individual concerns what must in many cases

Recent activities in
Bombay.

be a heavy financial handicap, would be undesirable and unjust.

The growth of a large labouring population in Bombay during the last war when there was a boom in all industries made the problem of housing extremely difficult. The resources of the local bodies were not adequate enough to meet the situation. It was, therefore, thought imperative that Government should shoulder a portion of the responsibility. A Development Board was formed and a big housing scheme was introduced in Bombay. The programme of the Development Board was to build 50,000 tenements by the end of 1929. After some progress had been made in house-building the activities of the Board were curtailed as the cotton industry, the main industry of Bombay, was overtaken by an acute depression.

In the solution of the housing problem in India there has been a lack of co-operation between
Lack of Co-operation. the parties concerned. The efforts made by enlightened employers to provide housing accommodation for their operatives seem to have encouraged a tendency to leave the whole problem to them. The local authorities have paid little or no attention to this problem. It is recognised by the Royal Commission on Indian Labour that every provincial Government should take the initiative by making a survey of its urban and industrial areas to ascertain the exact nature of the problem. Further, conferences may be arranged to give effect to any practicable scheme that may be put forward by the Government. Government should also be prepared to subsidise housing schemes advanced by employers. Thus unless there is a co-ordination between the Government, the employers and the general public, the housing problem will remain unsolved and many of the evils of industrialism will be perpetuated.

The wages of labourers in the mills were not responsive
Economic condition. to economic changes in the latter part of

the nineteenth century. Reliable records regarding the earnings of labour in this period are lacking. In a memorandum supplied to the Royal Commission on Labour in 1892 we find the following statement: "Fluctuations of wages in India are little or none; the rate has been practically stationary for the last thirty years and in the North-Western Provinces is stated to be slowly but steadily rising." In a note by Mr. N. A. Moos the average rates of wages in the textile industry were given as follows:—

		Rs.		Rs.
Male	...	12	Children	5
Female	...	9	Jobbers	50

He added in his note "carrying thus our retrospect to so far back as two or three decades, we cannot help being struck with the all along sameness of wages in the textile trade." Between 1873 to 1892 the index number of food prices rose 48 p. c., though the general index number for the whole of the selected articles showed an increase of only 2 p.c.

It is to be clearly inferred from this that the economic condition of the workers in textile trade deteriorated during this period. But the question was a comparative one. The wages offered by the mill industry were higher than other industries, particularly agriculture and hence there was a continued stream of labour from other industries to the textile industry. Since the nineties, however, rural wages began to rise more than industrial wages. "The rise in the wages of industrial labour has not also been as large as in the case of rural labour. Nominal wages have increased in every case, but the rise has not in all cases been as great as in prices. In some cases money wages notwithstanding an increase, are not now sufficient, to buy the same quantity of commodities as before"¹ In the current century the increase obtained by the employees in jute, cotton, wool and leather factories was satisfactory. In these industries the

¹. Report on an Enquiry into the Rise of Prices in India, para. 408.

labourers obtained an increase in wages varying between 41 to 47 p.c. and the increase in price was 32·p.c. in the quinquennium of 1905-1909.

Thereafter, however, the increase in wages did not keep pace with the increase in the cost of living in the case of all industrial labourers. During the war, however, the increase in prices was accompanied by such an acute distress that the employers were compelled to grant higher wages. The following table indicates the movements of wages during 1914-1922 in some selected industries :

		Jute Industry (weekly wages)								
		1914			1922					
		Rs.			Rs.					
Carders		2			2·9					
Spinners		3·45			5					
Winners		3·6			6·8					
Beamers		4·7			7·6					
Weavers		5·65			9·2					

Cotton Industry (Cawnpore)													
Blowing & Card Room				Mule Room			Throstle Room			Weaving Room			
				Men	Women	Children	Men	Women	Children	Men	Women	Children	
				Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1914	7·72	4·5	5	9·42	...	5·5	7·25	...	4·8	8·05	4·5	4·6	
1921													
Fixed wage earners including bonus.	18 to 19	...	12	19 to 26	...	12 to 14	17 to 20	...	12 to 14	17 to 27	...	12 to 14	

It will appear from the above tables that in the jute industry the wages of some classes of labour nearly doubled and in other classes the increase was more than 50 p.c. In the cotton industry the increase in wages was greater than in the jute industry. In the Bombay cotton mill industry an inquiry conducted by the Bureau of Labour showed that the average daily earnings of those men who worked full-time were Re. 1-5-6. Nearly 90 p.c. earned between 12 annas

to Rs. 2-4 per diem. The average monthly earnings were Rs. 34-15-2 which showed an increase of 90 p.c. on the corresponding figure for May, 1914. The cost of living of the working classes in Bombay increased 67 p.c. and it is therefore to be inferred that the economic condition of the labourers improved substantially after the war.¹

The Royal Commission on Indian Labour came to the same conclusion. They observe in the report: "In 1920 and 1921 there was a general rise in wages; prices reached their highest point in the autumn of 1920, and the general tendency thereafter was downwards, so that by 1923 the works were generally better off than before the war. Since then prices have fallen substantially; there have been some reductions of wages, but there has been no general fall in wages commensurate with that of prices, and the general level of wages for industrial workers is probably higher at the moment than at any previous period."² Statistics of wages in India are imperfect and the only reliable figures are those supplied by the Bombay Labour office. These figures relate to 1926 and were published in 1930. They indicate the earnings of the operatives in the three important industrial centres of the Presidency of Bombay:

Group.	Centre.	Average monthly earnings of all workers.	Workers who worked without any absence.	
			% age.	Average monthly earnings.
		Rs. A. P.		Rs. A. P.
Men	Bombay	37 10 2	53	44 8 6
	Ahmedabad	...	56	38 4 0
	Sholapur	28 15 6	31	26 10 2
Women	Bombay	17 12 4	33	20 4 6
	Ahmedabad	...	50	21 1 6
	Sholapur	9 15 7	25	11 6 7
Children	Ahmedabad	...	70	9 4 6
	Sholapur	5 10 4	36	6 18 10

¹ An Enquiry into Wages and Hours of Labour, Bombay, p. 20.

² Report of the Royal Commission on Indian Labour, p. 196.

The Jute Mills Association furnished the following statement of wages to the Royal Commission on Indian Labour and the figures relate to the year 1929 when the mills were working 60 hours per week but since then the mills have reduced their working hours :

	Multiple Shift.						Single Shift.		
	4-day week.			5-day week.			Rs.	A.	P.
	Rs.	A.	P.	Rs.	A.	P.			
Sacking weaving	8	2	9	9	3	0	9	8	0
Hessian weaving	5	15	0	7	4	9	8	4	6
Sacking winding	4	9	6	5	1	3	5	12	0
Hessian winding	4	8	7	5	6	0	5	12	0
Sacking spinning	2	9	6	3	4	9	4	2	0
Hessian spinning	3	0	3	3	14	0	4	2	0
Batching	2	12	9	3	9	9	4	5	8

The earnings of the operatives indicate that their standard of living cannot but be extremely poor. An enquiry into the family budgets of the workers in Sholapur and Ahmedabad discloses that over 82% of the income are spent on food, fuel, lighting, clothing and house-rent in Sholapur and 85% in Ahmedabad. In addition, there are bigger occasional expenditures which are unavoidable. There is, thus, little margin available which the worker can spend either for recreation or for improving efficiency.

One important factor which affects the economic condition of the labourers is their indebtedness. There are no reliable data regarding the extent of their indebtedness. But in Bombay it was shown by Mr. Findlay Shirras that no less than 47 p.c. of the families were in debt to the extent of two to three months' earnings.¹ "Interest on debts

shows an average expenditure of nearly 3 p.c. of the total monthly expenditure.

This heavy burden of indebtedness seriously impairs the efficiency of the industrial operatives of the country. There is little incentive to extra exertion if the increased earnings pass on to the pockets of the money-lenders. The problem with which we are confronted is how to eradicate this evil of indebtedness. With regard to the causes of these debts it is pointed out that the debts of the industrial worker are mainly due to extravagant expenses owing to marriage. Births and deaths in the family and unemployment due to sickness also account for indebtedness. In addition, the habit of indulging in intoxicating drugs is no less responsible for debts. The problem of indebtedness of the workers does not present an easy solution. Too often the labourers are coerced to incur debts by social pressure and unless they are educated, it would be beyond their capacity to throw off the influence of custom. Nor does legislation offer any easy solution for it. It is common knowledge that the Usurious Loans Act of 1918 has proved ineffective. It is often suggested that Co-operative Credit Societies which are relieving the agriculturists of the burden of high interest rates might be utilised to deal with the indebtedness of the industrial workers. But the main difficulty that stands in the way of establishing co-operative credit societies is that the workers are unsettled, drifting from mill to mill or from one centre to another. The Royal Commission on Indian Labour suggest that steps should be taken by which the realisation of debts from the workers should be difficult. If their credit is reduced, the money-lenders would hesitate to invest

1 " There is a general agreement as to the main fact and we are satisfied that the majority of industrial workers are in debt for the greater part of their working lives..... It is estimated that in most industrial centres, the proportion of families or individuals who are in debt is not less than two-thirds of the whole." Report of the Royal Commission on Indian Labour, p. 224.

their funds in loans to workers. The steps suggested by them are that the salaries and wages of the workers up to Rs. 300 should not be attached by courts nor should they be imprisoned for debts. But these measures are not likely to remedy the hardships of those workers whose earnings hardly cover their necessary expenditure.

But the most important reform that is needed at the present moment is that there should not be a great delay in the payment of wages. The prevalence of a monthly period of payment is not in the best interest of the employees and there should be a general adoption of the system of weekly payments and legislation should be undertaken to enforce this system without any delay.

Before the war trade unions hardly existed in India.

Trade Unions. The memorandum submitted to the Royal Commission on Labour in 1892 recorded

“No labour problems of a serious nature have yet arisen between employers and employed, consequently, with the exception of the Mill Hands Association, Bombay, no association of operatives for the purpose of dealing with trade disputes has been established.” As regards this Association the memorandum added “it is quite in its infancy and the men have still such an inherited dread of and respect for their employers that the combination is at present weak.”

Trade unionism is a very recent development in the industrial organisation of India. The severe economic distress due to the high range of prices towards the close of the war gave rise to considerable industrial unrest in India. This industrial unrest brought into existence a large number of organisations among the workers in the different industrial centres of the country. These organisations

have been chiefly formed by sympathetic and philanthropic politicians, lawyers and persons unconnected with industry.

It was, however, quite natural that in the early stage of the movement it should be guided by outsiders who were in sympathy with the aspirations of labour as hardly 5 p.c. of the labouring force are educated. The main object of these organisations has been to obtain increased wages from the employers. The origin of these organisations, in the majority of cases, is to be traced to strikes that occurred since 1920. Many unions disappeared upon the achievement of their object, *viz.*, the increase of wages. The Industrial Disputes Committee of Bombay described these organisations as "little more than strike committees, consisting of a few officers and perhaps a few paying members." But there are five unions among the textile workers that show some vitality and promise to develop into permanent organisations. The most important among them is the Bombay Textile Labour Union while each of the remaining four is called the Girni Kamgar Mahamandal (Mill Workers' Association). The objects of all the Mahamandals are stated to be the following :

(1) To promote friendly feeling and to foster a spirit of brotherhood and co-operation among the workmen in Bombay ;

(2) to promote friendly and harmonious relations between the workmen and their employers ;

(3) to endeavour to improve the conditions of work in the mills ;

(4) to improve the condition of workmen by initiating schemes of benefit insurance, provident funds, co-operative credit society and medical relief ;

(5) to maintain funds for the relief of members when sick or in distress.

These objects are laudable in themselves but the unions up till now have handled nothing but the wages question.

All unions have printed rules for their guidance but these are not strictly adhered to. Thus the Cawnpore Mazdur Sabha or Labour Union has a by-law, "That there shall be no strike in any mills without the sanction of the Sabha, and unless 75 p.c. of the workmen of the mills concerned agree to vote, at a meeting specially convened for the purpose ;" but this rule has been violated on several occasions. The Secretary of the Employers' Association at Cawnpore observed : " Since February, 1920, when it was agreed that there should be no strike without notice or enquiry, the workmen of some of the mills went out on strike without any notice and without even consulting the Sabha. Since then for several months strike followed strike and in each one there was indicated either the utter impotence of the Sabha or the strong partisanship of its leaders with the malcontents regardless of facts and the actual merits of the case. It was not able to enforce discipline among its members." ¹

As a consequence of lack of discipline among members, the employers are reluctant to recognise unions. But it is worthy of note that the beginning of trade union movement was fraught with difficulties in every country that succeeded to place the movement on a sound footing and it is not surprising that mistakes are committed in the initial stage. With the spread of education and the growth of a sense of solidarity and responsibility among the workers the trade union movement is bound to form an important feature of the industrial life of the country. The organised labour in Bombay fluctuated considerably during 1922 and 1926 as the following table shows :

1922	1923	1924	1925	1926
99,000	93,500	98,500	51,625	59,544

¹ Letter from the Secretary, Employers' Association, 14th July, 1921.

In Ahmedabad there are five separate unions of cotton mill workers. They are the weavers' union, the winders' union, the throstle union, the carders' union, the drivers', oilmen's and firemens' union. The total membership of these unions was in 1925—13,300. In Bengal a Jute Workers' Union has been established at Bhatpara. There are also other unions among the jute workers but these appear when a strike is to be organised.¹

There are no data available regarding the total number of members who have been organised in the whole of India but as the movement is in its infancy the proportion of union labour to the total labour employed in industries must be insignificant.² Much headway will have to be made before the trade unions can occupy an important place in the economic organisation of the country.

¹ R. N. Gilchrist, *Profit Sharing and Co-partnership*, p. 262. "In Bengal during the last four years (1920-1924) 73 labour organisations were formed but the membership is quite problematical."

² At the end of 1929, 87 unions claiming 183,000 members had been registered under the Trade Union Act; of these 38 with 90,000 member were registered in Bombay Presidency. The All India Trade Union Congress had affiliated to it in December, 1929, 51 unions claiming 190,436 members. *Vide Report of the Royal Commission on Indian Labour*, p. 321.

CHAPTER VII

LABOUR LEGISLATION DURING 1881-1911

The development of large-scale industries in India gave rise to a demand for humanising the conditions of employment of labour. In countries that have passed through industrial revolution, legislation had to be undertaken to deal with the abuses that resulted from an unrestricted employment of all classes of labour. The introduction of machinery in industries led to a great demand for the employment of children and women, for their labour was cheaper than that of adult males. The capitalist employers to reduce their cost of production competed with one another for the labour of women and children. Not merely was the employment of these classes of labour the special feature of the rising modern industries, but the long hours of labour became a standing disgrace from a humanitarian point of view. The work for 13 or 14 hours a day in heated, ill-ventilated and uncongenial surroundings imposed such a strain upon the physique of the operatives that they were prematurely used up. The life and the limb of the worker were exposed to the risks of accidents and there was an utter disregard of human lives in manufacturing industries.

In the beginning of the nineteenth century the humanitarians of Great Britain began to insist on legislative interference to improve the conditions of employment in factories. But, legislative interference with the freedom of disposal of labour and capital was contrary to the accepted economic philosophy of the time. It was apprehended that interference with the employment of labour would stifle the

growth of new industries, would drive away capital from the country and would defeat the object of the humanitarians by creating unemployment and encouraging idleness. These apprehensions proved groundless and by the middle of the nineteenth century a complete code was drawn up to regulate the employment of children and women in factories. The regulation of adult male labour did not find a place in the statute book for they have all along been treated as free agents. This class of labour has found in trade union organisation an agency to improve its conditions of employment. The limitation of the hours of employment of adult male labour is a matter of bargain between the trade unions and the employers.

The problems with which Great Britain was confronted also manifested themselves in a greater or less degree in countries that began to adopt the British industrial methods.

In India, it was in the latter half of the nineteenth century, that the capitalistic industries began to develop. The two industries that showed signs of industrial revolution were the cotton and jute. But, it was the cotton industry that particularly attracted the attention of the public in the seventies with regard to the abuses that crept into it in the matter of employment of women and children. In 1871, it was Miss Carpenter, an English philanthropist, who first invited the attention of the Secretary of State for India to the condition of Indian factories and urged the intervention of Government on behalf of the workers. But the question of legislative regulation of labour was not taken up till 1874. In the Administration Report of the Cotton Department, Bombay, for the year 1872-73, Major Moore, the Inspector-in-Chief, gave an account of the condition of local mills. In that report he observed that "The poorer classes derived great benefit from the mills, but that the advantage carried

Beginning of the
Factory Legislation in
India.

with it a corresponding and serious disadvantage. The hours of labour were not limited by any Government regulation ; the working day was unduly long ; the nature of the work was fatiguing ; whilst women and children were largely employed and generally without any periodical day of rest like Sunday. The physical wear and tear of the employed must therefore be considerable and that it was useless to expect that greater consideration would be shown to the female and juvenile hands by the millowner in the country than had been accorded towards the same class at home in the early years of the Industrial Revolution.”¹

About the same time Mr. Alexander Redgrave, H. M.’s Inspector of Factories, in his report for 1874 observed : “We see a cotton industry springing up in India, extending with rapid strides, and it behoves us to enquire whether that industry is carried on upon the old lines of cotton manufacture here, and if it is so carried on as is the common report, by factories working fourteen hours a day, it is well that legislature should step in while the industry is, so to speak, in its infancy and by wise and moderate regulations stop the growth of habits of long hours and of the employment of child labour.”

These reports made the subject of factory labour in India a matter for public concern. But the humanitarian aspect of the question was coloured shortly by the tariff controversy of 1875 which centred mainly round cotton duties. As a result of this controversy, the cotton industry began to loom large before the public and the whole commercial atmosphere was surcharged with bitterness and jealousy. The British public apprehending a loss of the Indian market began to press for bringing about an equalisation in the conditions of production in the two countries.

Agitation of Lancashire.

¹ Proceedings of the Legislative Council of the Governor-General, 1879, p. 240.

On the 8th February, 1875, Mr. Anderson (member for Glasgow) asked the Under-Secretary of State for India "if he is aware that an extensive factory system is growing up in India without any Government supervision for the protection and health of the women and children employed; whether his attention has been drawn to statements that these women and children are systematically worked for sixteen hours a day and in many cases even including Sundays; and whether the Indian Government will adopt some such legislation as we have in this country for the prevention of such evils before they attain greater proportions." In reply to this question the Under-Secretary of State for India observed that representations had been received on the subject which was engaging the attention of the Secretary of State.

As a consequence of discussions in the House of Commons on this question, the Secretary of State for India drew the attention of the Bombay Government to the grave abuses existing in the cotton textile mills, and the first Commission to enquire into and report on factory labour was appointed on the 23rd March, 1875. After the appointment of this Commission, the Earl of Shaftesbury, father of factory reform in Great Britain, took up the case of Indian Factory Legislation in the House of Lords on the 30th July, 1875. In the course of the debate on this question he observed that there were two issues which should be faced. "We wish while the system is yet young, to save India from all the difficulties and complications to which we have been subject to England. Secondly, there was a commercial view which could not be ignored. We must bear in mind that India has the raw material and cheap labour, and if we allow the manufacturers there to work their operatives sixteen or seventeen hours and put them under no restrictions, we are giving them a very unfair advantage over the manufacturers of our own country, and we might be under-

sold, even in Manchester itself, by manufactured goods from the East."

Whatever might be the motive which is attributed to Lancashire, there is no doubt that there was a genuine need for reform and if this reform was accelerated by the agitation of Lancashire, India has reason to be grateful to Lancashire at least in this respect. The Indian workers were illiterate and could not voice their grievances but the factory owners looked upon this agitation as a great conspiracy for stifling the growth of a new industry. It is worthy of note that these apprehensions proved groundless as the subsequent history showed but, on the other hand, the protection afforded to labourers was a real boon to the industry.

The Commission appointed by the Government of Bombay was asked to enquire into and report on the present condition and system of work in the factories in Bombay and its vicinity with a view to determining whether any legislation was necessary for the regulation of the hours of labour, specially in the case of women, young persons and children, for the protection of labourers against accidents, for the proper ventilation and sanitation of the factories and generally for improving the conditions of the work-people employed. The evidence submitted before this Commission disclosed the existence of abuses in regard to the employment of women and children but the members of the Commission were not unanimous in their recommendations. The majority held that the abuses complained of, were not serious enough to be dealt with by legislation. The factory people were as a body in many respects quite as well if not better off than most persons in the same position of life who were not employed in factories. The official members and the medical advisers recommended the enactment of a simple law regulating the hours of employment of children

Factory Commission
of 1876.

and requiring that machinery should be properly fenced. The minority suggested that children should not be employed under eight years of age and that children from eight to fourteen years should not work more than eight hours daily and that the hours of labour should not exceed twelve a day including one hour of rest, which could be given either at one time or at different times during the day, according to convenience. That all factories should be closed one day in seven and that good drinking water should be provided in every factory. The Government of India accepted some of these recommendations but rejected others as being too advanced for the country. In 1879 the first Factories Bill was introduced in the Legislative Council. The Hon'ble Mr. Colvin, in

The First Factory
Act in 1831.

introducing the bill, observed : " It is clear, however, that as regards employment of children and the protection of machinery there was room for abuses ; that these in some places already existed and that there was good reason to apprehend their increase with increased competition. It was shown also that Bombay was not the only province in which legislation was required, and that the evils described were making their appearance under other Governments. A good case was therefore shown to exist for the enactment of a regulating measure." ¹ The bill was a modest measure and was designed to provide only for the two objects of affording security to life and limb from accident, and of protecting children and young persons who had not attained an age at which they could be considered free agents. Further, the bill was framed as a permissive measure which could be put in force by Local Governments when the occasion arose. The bill raised two questions of principle :—whether there was any justifica-

tion for legislative interference with the employment of labour at a time when the industries of India were just developing and whether an Act of this type, if it be permissive, could not be used with discrimination against a particular province. Indian public opinion was not at this time sufficiently developed to pronounce a reasoned verdict on the question of legislative interference with child labour. Maharaja Sir Jatindramohan Tagore, who voiced Indian opinion, pointed out that "Bengal Government and intelligent public opinion here held that such a measure was not only unnecessary but that it would be positively injurious. European capital and European energy were being gradually drawn into this country to its immense advantage, and any uncalled for legislative intervention between labour and capital was, it was believed, sure to operate as a check in that direction, and that such a result could not but be considered as a misfortune to the country."¹ Strong objections were raised against the "permissive" character of the bill. The Hon'ble Mr. Grant, in the course of his speech, observed: "The term 'permissive' had a very seductive sound, conveying a sense of fair dealing and adaptation to local circumstances which gained for it much popular favour. But, it must not be forgotten that permission to some meant additional restrictions to others, and in no case could it be right to permit what the law declared to be wrong."² The Select Committee on the bill disapproved of the 'permissive' character of the bill and amended it as an all-India compulsory measure. The Bombay Millowners' Association observed: "The bill, as originally proposed, would have been a grave injustice to the Bombay factories, which would have been placed under a serious, if not ruinous, disability in

¹ Governor General's Council Proceedings, 1881, p. 91.

² *Ibid*, p. 101.

their competition with other places in India, into which it was apparently the intention of the Local Governments not to introduce the proposed law." As regards the other provisions, the original bill allowed young persons to be employed for eight hours and children for only six, the last named provision being in accordance with the English law. The Select Committee did away with this distinction and recommended the employment of children between the age of 8 and 14 years for 9 hours a day. The reasons advanced by the Hon'ble Mr. Colvin for extending the time of employment of children were far from cogent. He observed : " In the first place, it was beyond question that factory labour in India was not so severe or continuous as at home. Then, at home a child who worked in a mill for six hours was obliged by law also to attend school for three hours of the day and he was therefore employed in one shape or another for nine hours out of the twenty-four. In this country supposing that children were not employed for more than six hours, it could hardly be, in the existing state of education, that they would attend any school. If they were not allowed to remain in the factory, they would either be turned out to absolute idleness or to seek for manual labour elsewhere." ¹ To recommend 9 hours' labour for young children was nothing but cruelty and it was provided simply to satisfy vested interests. The apprehension that children after six hours' work would be engaged elsewhere was illusory. The bill as passed by the Legislative Council in 1881 fixed the minimum age of employment at 7 years and children were defined as persons between the ages of 7 and 12 whose hours of employment were fixed at 9 hours. Children were to be given one hour's rest every working day and four holidays every month. It was provided that the Local Governments could at their discretion appoint

¹ Governor General's Council Proceedings, 1881, p. 89.

inspectors but in default of such an appointment the Magistrate of the district would, in virtue of his office, be the Inspector in his district. Machinery was to be properly fenced and certain classes of factories such as indigo, tea and coffee factories were exempted from the provisions of the Act. The Act was made applicable to factories employing not less than 100 persons simultaneously. This was the first Factory Act in India. Though modest in its aims it established the principle of legislative interference with the unrestricted employment of labour in factories.

After this Act had been in force for some time the Bombay Government began to press that protection afforded to children by the Act was inadequate. There were very serious abuses especially in smaller factories employing less than 100 persons. The Act did not afford any protection to women who required it as much as children. They therefore pleaded for special powers to pass a separate legislation for Bombay. Meantime in 1882 Mr. King, one of His Majesty's Inspectors of Factories, was deputed by the Secretary of State for India to enquire into the working of the Indian Factory Act of 1881. Mr. King in his report pointed out that the Indian Act did not provide for any sanitary regulations which were insisted on by the British Act. It was urged that "The condition of the factory is reflected in the condition of the work-people. When the one is well ordered, healthy and cheerful, the people are the same; when the one is neglected by the master, dirty and ill-arranged, the people are almost sure to be morally and socially inferior, and carry the influence of the factory into their homes."¹ The Sanitary Commissioner of Bombay stated: "That the condition of the mills in India was generally far from being as bad as he had been led to expect,

Defects of the Act
of 1881.

¹ Report of the Bombay Factory Commission, 1884, p. 6.

but he nevertheless was of opinion that some better arrangements were required for ventilation and latrine accommodation." The analogy between the Indian and the British law disclosed how inadequate was the protection afforded to the operatives. It was pointed out that in England children between 10 and 14, young persons between 14 and 18 and women were protected but in the Indian Act children between 7 and 12 were protected and that very inadequately. These criticisms necessitated fuller information on the employment of labour if there was to be further advance in the matter. The consequence was that the Government of Bombay appointed another Commission in 1884.

The Commission of 1884 deprecated any special legisla-
 1884. tion for Bombay. They saw no valid reason as to why the trade of Bombay should be handicapped and subjected to most unfair competition. Further, the Act of 1881 did not provide any safeguard against overwork. "If the law has hitherto been obeyed, such is ascribable more to willingness on the part of the owners than to the effect of supervision. We may however conscientiously say, that we fear that many children are worked full time."¹ In Great Britain to enforce the law against overwork it was found absolutely necessary not merely to fix a maximum period of labour but also maximum limits within which such period might be taken. It was pointed out by the Commission that women were very often overworked. They could be worked as long as men or from sunrise to sunset, i.e., 11½ hours a day or 80½ hours in a week in the cold weather and 14 hours a day or 98 hours a week in the hot weather, and if an artificial light was used they might be worked day and night for days consecutively and that "such excessive labour is exacted in the

¹ Report of the Bombay Factory Commission, 1884, p. 10.

small ginning and press factories of Khandesh, is distinctly proved by the evidence before us." Mr. R. F. Wadia in his evidence before this Commission observed: "In busy seasons, i.e., in March and April, the gins and presses sometimes work both night and day with half an hour's rest in the evening. The same set continue working day and night for about eight days."¹ The Commission thus made out a case for further legislative interference. Their recommendations were as follows :—

(1) Provisions corresponding with those contained in the English Factory Act should be embodied in the Indian Factory Act to ensure that factories are maintained in a satisfactory sanitary condition.

(2) No child of less than nine years of age should be employed in a factory and no child should be employed for more than nine hours in the 24, the working hours being from 7 A.M. till 5 P.M., one hour being allowed for meals or rest. In the case of a child having some educational qualification, the age of admission to a factory may be eight.

(3) No mill hand should be regarded as an adult until the age of 14. An exception to this rule should be permitted in the case of persons who had satisfied a certain educational test and such persons may be treated as adults at the age of 13.

(4) No woman should be employed in a factory for more than 11 hours in the 24 and women's working hours should be from 6 A.M. till 6 P.M. with an hour's interval for rest and meals.

(5) Sunday should be a holiday for women and children. Provision was made in the Act of 1881 for granting four holidays to children in the month. The Commission advocated the extension of the law to women. "On an average,"

they pointed out, "only 15 holidays are given throughout the year in Indian factories. In England besides 10 holidays there are 52 Sundays and 52 half Saturdays making a total of 88 days altogether."¹

(6) All factories in which not less than 10 women or children are employed, in which steam, water or mechanical power is used or where manual labour is exercised, should be brought under the operation of the Factory Act irrespective of the total number of hands employed or the number of days in the year during which the factory is worked.

The Government of Bombay reviewing these recommendations expressed the opinion that it was very desirable that the minimum age at which children should be employed, should be raised from seven to nine years and that children should not be actually worked for more than nine hours in the twenty-four. But they were unable to perceive the advisability of the adoption of the suggestion that a child who fulfilled a certain educational test, should be allowed to commence work a year earlier. The objection in India to the employment in factories of very young children was based on physical and not on educational grounds and that constant and protracted work in warm and often imperfectly ventilated buildings must exercise a prejudicial effect on immature children, stunting their growth and checking the development of their physical powers. The Governor in Council was disposed to render the Act applicable to all factories or places where either 10 women or children were employed or 20 persons in all were employed whether partly women or children or all

¹ Mr. S. S. Fengalee and Dr. Blandy pressed to make Sunday a holiday for all operatives. They remarked : "Those who are unacquainted with the working details of textile factories in Bombay, but are intimate with the same industry in England are liable to entertain the opinion that by prohibiting the employment of women and children on Sundays factories could not work and therefore adult males would thereby be unavoidably benefited. But to think so would be a mistake for the percentage of employment of adult males in textile factories is considerably higher than in Great Britain."

male adults. Indeed, legislation would seem to be more imperatively needed in the case of small factories owned by petty capitalists and worked so as to secure a profit without any consideration for the life and health of the miserably paid employees than it was in the instance of larger mills.¹

In 1888 Mr. Smith and Mr. James Maclean called attention to the hours of labour in Indian factories and the absence of any provision in the Factory Act rendering a certain number of holidays compulsory. They enquired whether the Secretary of State for India would consider the expediency of recommending to the Government of India the desirability of applying the English Factory Act to India. The Secretary of State for India in his despatch, dated the 3rd May, 1888, called for information on the working of the Indian Factories Act and on the system of factory inspection by Magistrates. It was urged in the same despatch that Mr. Jones, a former Inspector of Factories in Bombay, had alleged long hours of work and few holidays in Bombay factories, occasional withholding of wages from labourers, the incompetency of mill managers, the dangerous character of many mills, the inadequate fencing of machinery, and the ill-ventilated and filthy state of many workrooms. On the 5th November, 1888, the Manchester Chamber of Commerce passed the following resolution: "That in view of the excessive hours of labour now worked in the cotton mills of British India this Chamber recommends that the provisions of the British Factory Acts, so far as they relate to the employment of women, young persons and children, should be extended to and include the textile factories of India." The Madras Chamber of Commerce expressed their disapproval of the assertion by Manchester, of a claim to have the labour of this country regulated by the labour in rivalry with it elsewhere. They observed: "The

¹ Resolution of the Government of Bombay on the Report of the Factory Commission of 1884.

alleged desire 'to lift up the poor people of India and to improve their condition' has so little to do with the demand for justice for the Indian operatives, that it may be eliminated from the consideration on the subject; whereas 'dictates of jealousy' the wish 'not so much to benefit a class in India' as to recover the China market, 'self-interest' the discovery that 'competition in India was too severe' the interest of Lancashire trade and not the interests of humanity to which allusion was made at the meeting under notice, may be reasonably supposed to have exerted some influence on the supporters of the motion."¹ The Chamber did not deprecate legislation on the subject but submitted that it should be guided not by the desire to procure uniformity with similar legislation in England but by an enlightened perception of what would be conducive to the welfare of this country, irrespective of the demands of competing interests. The Government of India in their letter, dated the 5th March, 1889, expressed the opinion that the English Factory Acts were inapplicable to the present conditions of labour in Indian factories. They held that the work of the operative in India was far more desultory and less exhausting than that of an operative in England and that provisions which were rendered necessary by the exacting nature of labour in English mills were not demanded in the interests of the Indian operatives who would indeed, be prejudicially affected by them, while they would impose a needless and uncalled for obstacle to the development of industries in India. The Government of India however agreed generally with the recommendations of the Bombay Commission except that they considered that holidays for women were unnecessary. In regard to the inspection of factories they endorsed the opinions of the Local Governments and administration which declared that the system under which the work of inspection was undertaken

¹ Report on the working of the Indian Factory Act, 1889, p. 29.

by the Magistrate of the district was on the whole satisfactory. In the same year on the 24th October, the Bombay cotton mill operatives submitted a memorial to the Governor General in which among other grievances they pressed (1) that all mill hands be allowed one complete day of rest every Sunday ; (2) that half an hour's recess be allowed them at noon every working day ; (3) that work in mills should commence at 6-30 A.M. and cease at sunset. They felt the pernicious effects of the long hours of work and wanted the millowners to realise that the loss to them from overtaking the energies of their servants by the unnatural system of incessant work for nearly 14 hours a day was far greater than they were aware of.

The Government of India drafted a bill to amend the Factory Act of 1881 in the light of the recommendations of the Bombay Factory Commission but this draft bill did not satisfy the British public who wanted greater restrictions upon the employment of children and women. The Blackburn and District Incorporated Chamber, in their letter to the Secretary of State for India, dated the 6th February, 1890, pointed out the great discrepancy between the proposed Indian Factory Act and the Factory Acts ruling in England and prayed that the Act now before the Legislative Council might receive further and fuller consideration. A comparison between the English and the Indian Law showed the following state of things :

	In England.		In India.
	Hours.		Hours.
Female over 18	10		11
Male and female between 14 and 18.	10	Female	11
Male and female between 10 and 12.	5	Male—no limitation	9
Male and female between 9 and 10.	...		9

The Chamber urged that the draft bill permitted children between 9 and 12 years of age to work for 63 hours a week or for $6\frac{1}{2}$ hours longer than the adult factory hands in England. In England children below the age of 10 years are not allowed to work, and a child until he has reached the age of 14 is only allowed to work for half time, i.e., $28\frac{1}{2}$ hours.

That the temperature in some parts of India where factories exist fluctuates on hot days between 112 and 117 degrees in the shade and must nearly be unbearable in the factories when steam is admitted to create a vapour. Prolonged work particularly for women and children in this stifling atmosphere must prematurely impair their physical energies. The Chamber accused the Government of India of being unduly influenced by Indian millowners who desired an unfair field for competition with England. It is true that the interests of humanity demanded that women and children who are a helpless lot in India, as elsewhere, should be legitimately protected from overwork. But the motive which induced interested parties in England to influence legislation in India was far from being commendable. The alleged competition between Indian and Manchester cotton goods was illusory. At the time of the fiscal controversy during 1894-1896 Sir James Westland showed that India produced only coarser fabrics and yarns whereas Manchester exported finer goods and yarns. Only 6 per cent. of the goods produced by India were on a competitive basis.

The attitude of the British public and the pressure of the Secretary of State compelled the Government of India to defer the consideration of the bill for some time. Before proceeding with the bill, the Governor General in Council desired to ascertain by means of an enquiry conducted in the different centres of factory labour, the views and requirements of the Indian operatives themselves as to the

restrictions to be imposed upon their labour in factories.

Factory Commission of 1890. A Commission was appointed by the Government of India with the following terms of reference :

(1) Is the limitation of the hours of work for women to 11 in any one day proper and sufficient in view of the conditions under which factory labour is performed in India and do the female operatives desire that the day's work should be limited to this amount and if not to what amount ?

(2) Should the law draw a distinction between young persons and adults ?

(3) Is the limitation of the hours of labour for children to 9 a day proper and sufficient ?

(4) Is any provision required for prescribing an allowance of holidays for male operatives ?

(5) Do the male operatives desire that a general working day, and if so of what length should be fixed by law except in cases in which men work in shifts or sets and if this change is not desired by the operatives themselves, do the conditions under which they work demand that it should be adopted ?

Referring to the question of the limitation of the hours of work of women the Commission found that women were mainly employed in the cotton, jute and woollen industries. In the cotton industry 80 per cent. of the women were employed in reeling and winding operations in which motive power was not used. In these operations the Commission gave it as their opinion that as a rule they worked less than 11 hours and as piece workers they could and did take such intervals of rest during working hours as they liked for necessary purposes.¹ In the jute industry a larger proportion

¹ Report of the Indian Factory Commission, 1890, p. 6.

of women was employed with the moving machinery than in the cotton industry but they worked in shifts and the total number of hours in their case was usually nine and never exceeded ten. The limitation of the hours of labour to 11 would inflict injury upon 20 per cent. of the female operatives who worked with moving machinery in the cotton industry. In the interests of these 20 per cent. of the women labourers the Commission observed : " If the hours of labour are limited to 11 for women working with moving machinery, we are convinced that, without any exception, these operatives will be replaced by male adult operatives or half-time children."¹ The hours of work in factories were longer than 11 hours and if a restriction was imposed upon the employment of female labour, the employers would dispense with such operatives. If, however, legislation was approved for the protection of women an exception should be made in the case of such female operatives as worked with moving machinery. The Berlin International Conference adopted the rule that the actual work of women should not exceed 11 hours a day and it should be broken by rests of a total duration of one and a half hours at least. But exceptions were also permitted to this rule. The Commission therefore observed : " The Government of India in legislating for the first time for the protection of women would, in our opinion, be justified in not making the proposed restriction too absolute."²

With regard to the age of children the law of 1881 was practically ineffective, as it is impossible to guess with accuracy the age of any child who may be over ten and under thirteen. "The result of the law of 1881 was that hundreds of children between the ages of 9 and 12 were employed in India as full-timers doing 12, 13, and 14 hours' work

¹ *Ibid*, p. 6.

² *Ibid*, 7.

to the great detriment of their health. It was urged that administrative difficulty would defeat the creation of a separate class of young persons. They, therefore, suggested the raising of the maximum age of children to 14 as they thought that boys and girls of 14 were physically well able to do full-time work of the kind required of them in factories.

As regards the hours of work, nine hours' work for children except under the shift system was deemed to be too long for Indian children. The limit of nine hours was found unsuitable and impracticable by millowners. They therefore proposed that in those mills which did not work on the Bengal Shift System, the half-time system would be the only solution of all the difficulties which surrounded the present question. The extreme half-time should be fixed at $6\frac{1}{2}$ hours. With regard to the apprehension that if the half-time rule for children be adopted, children would work in one factory in the morning and in another factory in the afternoon, the Commission expressed the opinion that "If a half-time law for children was passed, and the guardian as well as the employer were made responsible for seeing that it was not broken, we are confident that for every hundred cases in which the law is now evaded, there would not be more than one case of a child found working in two factories on the same day."¹

Referring to holidays the Commission proposed that provision should be made in the Act for securing to male adult operatives the same holidays as were recommended for women and children. The Committee of medical experts appointed by the Government of Bombay in 1884 reported that in the interests of the general health of the operatives, it should be compulsory to allow certain periods of rest in the day and a certain fixed number of holidays, say four per

¹ Report of the Indian Factory Commission, 1890, p. 10.

month. The Indian operatives were unanimous in demanding the concession. As to restriction on the employment of adult male labour the Commission were opposed to legislative interference with the employment of male adult labour. They held, "There is nothing in the conditions under which Indian operatives work which calls for any legislative restrictions as to the hours an adult male may choose to work. Nor can we conceive any conditions which can ever call for state interference in the matter."¹

Following the recommendations of this Commission the Act of 1881 was amended by the Act of 1891. This Act was a distinct advance upon the previous Act in the matter of safeguarding the interests of labour. Smaller factories were brought under regulation as it was provided that the Act would be applicable to establishments wherein not less than 50 persons were employed. The hours of labour of women were limited to 11 and no woman should be employed before 5 o'clock in the morning and after 8 o'clock in the evening in any factory in which a system of employment in shifts or sets approved by the local Inspector was not in force. The minimum age of employment of children was raised to 9 and no child was to be employed in any factory between 8 P.M. and 5 A.M. and should not actually be employed in any factory for more than seven hours a day. The age at which full-time work could be exacted from children was fixed at 14. As regards the period of rest on working days it was provided that every woman should be allowed an hour and a half for every 11 hours' work and every child should be allowed an interval of rest for at least half an hour for every six hours' work. Sunday was declared to be a general holiday for all operatives. The Act of 1891 witnessed the close of the first chapter in the history of

¹ Report of the Indian Factory Commission, 1890, p. 14.

labour legislation in India. Agitation, enquiry and discussion over a period of fifteen years succeeded in raising the minimum age of employment of children to 9, in establishing the principle of limitation of the labour of women and in securing a weekly rest day for all operatives.

The Act of 1891 satisfied Lancashire interests. But agitation shortly commenced from another quarter. Agitation of the Dundee manufacturers Hitherto, agitation centred chiefly round the cotton industry but now the jute manufacturers began to express their dissatisfaction with the Indian Factory Act. During 1875 and 1890 the jute industry made considerable progress. At the same time the introduction of electric light in some of the factories brought the question of night work to the forefront. The jute industry worked under a system of shifts and the law relating to the prohibition of night work of women was not made applicable to it. The Dundee Chamber of Commerce complained against the laxity of the Indian Factory Act which permitted women and young persons to work 22 hours under the shift system in the jute industry. The Bengal jute industry was, thus, in unfair competition with the home industry and it was proper that "factories conducted by subjects of the Crown, and equally under the control of Parliament whether in India or at home, should be subject to similar conditions; particularly, that they should not be allowed to employ women, young persons or children before six in the morning or after sunset at night."¹

The Bengal Chamber of Commerce in their reply attributed this interference of the Dundee Chamber to their complete ignorance of the working of the manufacturing industries in India and condemned the spirit which dictated it. "Put boldly," they observed, "it is a claim that Parliament shall at any cost protect Dundee and similar

manufacturing centres against India and the development of those industries which are beyond question indigenous to India." ¹ Colonel Meade King, Superintending Inspector of British Factories, joined issue with the Dundee Chamber and expressed the view that "A comparison between the working hours of British and Indian operatives discloses that some of our home manufacturers, especially in Dundee and parts of Lancashire, are severely handicapped in their competition with manufacturers in India and it seems questionable whether the Bengal Chamber were quite justified in resenting the claims of Dundee Chamber so emphatically as they have done on the ground of competition or jealousy." Correspondence ensued between the Secretary State of India and the Government of India with regard to the administration of the Factory Act and the employment of women and young persons with the result that the Government of India

Textiles Labour
Committee of 1906.

appointed a Committee in 1906 to enquire specially into the conditions of labour in the textile industries. The terms of reference to the Committee were as follows :—

(1) Whether the working hours of adult males should be limited and whether the physique of the operatives is affected by long hours.

(2) Whether before children are allowed to work in factories, certificates of age and fitness should be required.

(3) Whether the minimum age of children should be raised beyond 9.

(4) Whether as the result of employment as adults, of persons between the ages of twelve and fourteen, there has been physical deterioration requiring the creation by law of a special class of persons known as young persons.

(5) Whether a separate staff of medical factory inspectors should be entertained.

¹ *Ibid*, p. 233.

The Committee found that the introduction of electric light in Indian mills led to excessive hours of working. The machinery of certain mills was in motion from 5 A.M. to 9 P.M. and in others the hours of running were less but in busy times were generally increased. This was the period when China market was active and many mills worked long hours to increase their output. The Bombay Millowners' Association failed to arrive at any agreement regarding restriction of the hours of working the mills. The Committee expressed the opinion that anything short of legislative restriction would not prevent the abuses of overwork of the adult male operatives. They recommended that the actual period of the employment of the adult male operatives should be limited to 12 hours and a compulsory rest for half an hour between 12 noon and 2 P.M.

They further recommended that the law should require that no child under the age of 14 years 'shall' be employed in factory until he produced a certificate of age from the certifying factory surgeon. With regard to the raising of the minimum age of children, the Committee were reluctant to raise the age, as educational facilities for school attendance throughout the country were inadequate. They apprehended two evils from the raising of the minimum age of children—either many of those children would be employed in places not under the Factory Act where the conditions of labour were much worse or if unemployed they would possibly be idling in the bazaars instead of earning a small sum towards the family expenses. The age at which full-time work is to be taken should be raised to sixteen. The Committee deprecated night employment of women. Such employment would not only injure the health of the operative but that of her future offspring. There were over 1,000 ginning mills in India, in a large proportion of which the health of women was being injured by night work. It was also observed that in the case of night employment of women the home

would be neglected, and children would be uncared for. The Committee therefore recommended the prohibition of night work for women. They also urged that serious attention should be paid to the homes and surroundings of mill hands.

In the resolution in which the Government of India decided to appoint the Textile Factories Committee it was provided that should their report establish the existence of abuses which required to be remedied, a representative Commission would be appointed to examine the whole subject comprehensively before any radical changes were made in the existing factory law. The Committee was of opinion that several alterations in the Act of 1891 were necessary. A Commission was therefore appointed in respect of all factories in India to investigate the questions referred to the Committee of 1906. This Commission made an exhaustive enquiry into the conditions of labour not merely in textile factories but in all factories. Their findings on the question of excessive hours were the same as those mentioned by the Committee of 1906.

In Bombay in the mills fitted with electric light the operatives worked $14\frac{1}{2}$ hours. In Ahmedabad in the longest day they worked $13\frac{1}{2}$ hours. The Millowners' Association in Bombay was powerless to enforce their resolution in favour of a 12-hour day as against the individual members of the Association. Their difficulty to enforce a twelve-hour day was accentuated by the attitude adopted by the employees in several mills when they found that a reduction in the working hours led to a corresponding diminution of the wages. The weavers in the jute mills were invariably on duty for

¹ Report of the Textile Factories Committee, 1906, p.14.

² *Ibid*, p.15.

the full number of hours during which the mills worked, i.e., from 5 A.M. to 8 P.M. In Delhi the working hours were very long. In the cold season the mills actually worked 13, 13½ or even 14 hours a day. In seasonal factories, such as cotton ginning, the gins actually worked for about 12 hours with one set of hands and 24 hours with a double shift. In some cases the gins worked up to 15 hours and in rare cases up to 18 hours with one set of hands. Whether these excessive hours of work caused physical deterioration, the Commission were unable to give an unhesitating and clear verdict. The medical evidence on the subject was conflicting, as it was not possible to trace the life-history of a large number of operatives. But Dr. Nair, one of the members of the Commission, observed: "Intense and concentrated labour in a cotton mill for 13 or 14 hours, day after day, is beyond the physical endurance of ordinary human beings. In all our inspections of mill operatives, I noticed that there were very few men over 40 to be seen. The reason of the early retirement of the Indian mill operative is his physical breakdown which unfits him for any further mill work."¹

The law relating to half an hour's interval in the midst of the day was not observed in the case of the jute mills so far as the weavers were concerned. It was not also observed in the cotton mills in Calcutta and also in seasonal factories.

In the United Provinces, the Punjab, Southern Madras and in the cotton mills of Bengal, children were habitually worked during the whole running hours of the factories in pure disregard of the law.² In the jute mills the proportion of underage children employed as half-timers amounted to 30 or 40 per cent. of the total half-timer staff. In two

¹ Dr. Nair, *Minute of Dissent*, p. 89.

² Report of the Factory Commission, 1907-08, p. 16.

Half-timers worked
as full-timers.

mills in Bombay 18 per cent. of the half-timers worked as full-timers. The Commission therefore observed : " The employment of children on full time, and the working of underage children are the most serious abuses regarding child labour which we have discovered." ¹

Legislative restriction
of adult male
labour.

The most important question which the Commission had to decide was, whether it was desirable to restrict the hours of labour of adult male operatives. To the principle of the legislative restriction of the hours of adult male labour, the Commission pointed out that, in the first place, it was a "principle of doubtful validity" and it had commanded acceptance in very few countries. Secondly the direct limitation of the working hours of the adults would impose on all factories a restriction which was found to be required only in textile factories. Thirdly, there were strong practical objections to the general enforcement in India of any law rigidly restricting the working hours of adult males as in all industries overtime was frequently necessary and this difficulty could not be solved by instituting a system of exceptions as in France. Fourthly, the imposition of a direct restriction on the hours of adult labour would be repugnant to the great majority of capitalists both in India and abroad who invested or were thinking of investing capital in India. Lastly, it would give wide currency to the opinion that if the principle of legislative interference with the employment of adult male labour was accepted pressure would be brought to bear in order to utilise that power of interference in a manner calculated to promote the interests of Lancashire and Dundee rather than those of India.² The Commission, therefore, concluded that there was

¹ *Ibid.*, p. 17.

² *Ibid.*, p. 88

no necessity for this drastic course because it would cause the greavest inconvenience to existing industries most of which had never worked long hours, and such a measure, they thought, would seriously hamper the growth of industrial enterprise. Dr. Nair dissented from this view. He thought that as the charge of working long hours habitually had been clearly proved against the textile industries in India, "nothing but legislative restriction of the hours of adult labour within reasonable limits will effectively prevent these long hours from being worked."¹ The Commission proposed that, instead of a direct limitation of the hours of labour of male adult operatives, the same object could be achieved by indirect measures. The measures proposed by them were based on the consideration that, children and young persons in a spinning mill were about one third of the total staff and the hours fixed for them would absolutely determine the working hours of the whole department.² They therefore laid importance upon the creation of a separate class of "young persons" comprising all young adults between the ages of 14 and 17 with working hours limited to 12 in any one day. This recommendation, however, seems to be inconsistent with their professed view that "we would strongly deprecate as most injurious any attempt to apply the laws and regulations governing factory labour in the United Kingdom as such to India; or to secure any definite relation between the labour laws of England and India."³ For, Great Britain recognised a separate class of young persons and the Commission proposed the same thing for India. The other recommendations are that the working hours of children should be reduced from 7 hours to 6 hours. The protected classes are to be prohibited from working after 7 P.M. and there should be a compulsory

¹ Dr. Nair, *Minute of Dissent*, p. 81.

² *Report of the Factory Commission, 1907-08*, p. 24.

³ *Ibid.*, p. 5.

interval of rest after six hours' continuous work in place of the midday interval. With regard to the labour of women they proposed a reactionary measure. The restrictions at present imposed on the employment of women were suited neither to the operatives themselves, nor to their employers and they were ignored in practice. It would be advisable to allow women to work for the same hours as young persons, *i.e.*, for not more than 12 hours in one day. Seasonal factories which are at present solely excluded from the Act on the ground that they do not work for more than four months in any one year should be made subject to its provisions.

In July, 1909, the Government of India introduced a comprehensive bill to regulate the employment of labour in factories. The Govern-
The Factory Act of
1911.ment while agreeing with the findings of the majority did not accept their important recommendations. They, however, proposed a limitation of the working hours of adult males to 12 hours a day. This change in law was far-reaching in its character and gave rise to a heated controversy. The Hon'ble Mr. Harvey while introducing the bill pointed out that it was the duty of Government to render impossible the recurrence of the conditions which had been allowed to grow up in Bombay in 1905 and all were agreed that the object which the Government must seek to obtain was the limitation of the working day to an average of 12 hours. No responsible Government could possibly refuse to take action in the face of reports from a Committee under expert guidance and from a Commission of which three millowners were members, supported as these were by official opinion and by a considerable section of the commercial community.¹ The Local Governments and Administrations with the exception of the Government of

Burma were of opinion that the case for imposing restrictions was strong and it was the millowners who alone opposed the measure. The Commission were also inclined in favour of a limitation of working hours but this object they proposed to achieve by an indirect method. They disapproved of the limitation of the hours of work of adult males because they were not prepared to accept it as a principle which found acceptance in few countries. The Hon'ble Mr. Harvey, however, expressed the view that "If it is conceded that legislative measures are necessary to prevent the working by any operative excessive hours, then the question whether the desired result is obtained by direct or indirect methods is not a question of principle at all but a question of expediency and administrative convenience."¹ He deprecated the reference to the British example, as the existence of trade union organisation in England afforded sufficient protection against overwork. The Indian millowners as represented by Sir Sasson David and Sir M. Dadabhoy argued from the standpoint of abstract right. They regarded the limitation of the hours of labour of adult males as an unwarranted interference with the freedom of contract. There was no valid reason to have one principle for Great Britain and another for India. The real reason why Great Britain has not adopted the principle of limitation is "not the existence of trade unions but that the direct restriction of the hours of adult males would be an interference with their personal liberty which would not be tolerated." Sir M. Dadabhoy pointed out that it was not possible for them to resist the powers that dictated this interference, and as the cotton industry was passing through a period of depression, such a restriction was bound to accentuate its difficulties. The reason advanced by the Hon'ble Mr. Harvey for rejecting the recommendation of

¹ *Ibid*, p. 6.

the majority of the Commission on this question was that the formation of a class of young persons would involve grave administrative difficulties. It was found sufficiently difficult to enforce the law as regards children and it seemed likely that the same difficulties would appear in an aggravated form in the case of young persons. Further, the creation of a separate class of young persons would not attain the desired object. In the first place, factories might be able to do without the young persons and women altogether and employ only male adult operatives. Secondly, they might be able to concentrate the women and young persons in certain departments of the mills, and would then work for twelve hours in these departments and for longer hours in other departments. The conclusion reached by the Government was that there was the gravest reason to fear that the adoption of the Commission's proposals would fail to prevent abuses. The mill-owners took the view that the demand for labour in mills was greater than the supply and it would not be possible to dispense with the labour of women and young persons. Further, it was beyond their comprehension that the industrial interests of a country should be subordinated to administrative convenience. But in spite of the opposition of the mill-owners the Factory Act of 1911 was passed. The Act laid down elaborate rules for the health and safety of the labourers, for the fencing of machinery and for the prohibition of women and children in dangerous work. It was provided that in all factories there should be a weekly holiday and periodical stoppage of work at intervals not exceeding six hours. Adult workers in textile factories were not to be employed for more than twelve hours in any one day. The working hours of children were not to exceed six a

Main provision of
the Act of 1911.

¹ Proceedings of the Council of the Governor General, 1911, p. 85.

day. Local Governments were empowered to appoint inspectors and certifying surgeons for factories in their jurisdiction.

While the Factories Bill of 1890 was under consideration interest was aroused over the question of regulation of labour in mines. Even before 1870 the matter was discussed now and then but the condition of the mining industry was not deemed of such importance as to require legislative interference. The Berlin Conference of the same year adopted a rule prohibiting the employment of women and children in underground working in the mines. Great Britain had prohibited the underground employment of women and children in 1842. It was the Berlin resolution to which Great Britain was a party, that induced the Secretary of State for India to take an interest in the conditions of mining labour in India. In his despatch, dated the 3rd July, 1890, the Secretary of State for India wrote: "As yet no legislation has been undertaken in India for regulating work in mines. At the present time collieries and possibly some of the gold mines, would seem to be the only mining industries in India that require regulation. Now that a single colliery proprietor like the East India Railway has a yearly output of nearly 400,000 tons of coal, and that a single state colliery like the Warora, yields 140,000 tons a year, the time has come for opening the subject. I request that you will consider, how far it may be necessary and desirable to frame a bill for the inspection of mines and for the regulation of employment therein, of women, young persons and children, etc."¹ When the Government of India were collecting information on this subject, the Secretary of State for India, in his despatch,

¹ Copy of correspondence between the Secretary of State and the Government of India respecting the employment of women and children in the underground workings of Indian mines, 1893, p. 3.

dated the 12th November, 1891, again wrote : " But, as at present advised, I think it most desirable that the employment of women or girls underground should be altogether prohibited in India. The decision against such employment was unanimous and unquestioned at the Berlin Conference. I understand that women are not employed underground in Indian mines belonging to Government and the prohibition of such employment in private mines would cause little disturbance at a time when the coal industry of India is still in its infancy. The age for children should be twelve or at the lowest 11." There were at the time 78 mines and collieries employing a labour force of 31,471 persons of whom over 18,818 or 59·8 per cent. worked underground. Of this number 8,779 or 28 per cent. were women and 3,489 or 11 per cent. were returned as young persons and children.

The Government of India, in their reply to the Secretary of State for India, dated the 5th October, 1892, pointed out that if mining legislation was undertaken it would naturally divide itself into two parts : (1) the regulation of labour in mines and the restrictions to be imposed on the employment of women, young persons and children ; (2) the general management and inspection of mines. With regard to the first point, the Government of India observed that the facts disclosed by the reports of the Local Governments did not warrant the undertaking of any legislation without detriment to the industry. " It can scarcely be questioned," they said, " that any restrictions upon the employment of a class of labourers in such extensive demand and still more their absolute exclusion, will, at least at the outset, entail very serious consequences to the mining industry even in its present stage of development."¹ The Chief Commissioner of the Central Provinces stated in strong terms the objections

¹ Correspondence respecting the employment of women and children in the mines, 1893, p. 7.

to which the employment of women and children in the mines is open. The Lieutenant Governor of Bengal however laid great stress on the necessity of providing new occupations and on the danger of checking the expansion of mines. His Honour admitted that one point in which legislation might do good was the prohibition of the employment of children underground but considered that there was no necessity for legislation whatever and entirely agreed with large bodies of authorities whom he had consulted and who were almost unanimous in opposing the exclusion of women.¹ It was argued by the Government of India that the conditions of labour in the mines in India were different from those prevalent in European countries. Work in mines was carried on under the family gang system which was a sufficient check against immorality. They, therefore, held the view that the mining industry now at a comparatively early stage of development, might receive a serious check from the adoption of measures calculated to disturb the existing conditions of mining labour which were in no way harmful or distasteful to the labouring population, but on the contrary, were in close accordance with their ordinary social habits and customs. The Government of India, however, expressed a desire to watch the development of the mining industry and have it investigated by a competent Mining Inspector.

In 1894 the Secretary of State for India deputed Mr. Grundy, to enquire into the management and the labour conditions of Indian mines. In his report, Mr. Grundy pointed out that there was, except in a very few mines, an almost entire absence of such essential principles and practice of mining knowledge as ventilation and timbering. Ventilation was much neglected, fire-damp was not properly tested, used

Report of the Mining Inspector.

¹ *Ibid.*, p. 7.

and unused shafts and machinery were often left unfenced. In quite a number of mines no plans of the underground workings were maintained. Regular inspections of all underground parts were not carried out by the mine staff. Accidents were not properly attended to and promptly reported. This picture of the technical management of mines led the Government of India to devise means to deal with mines so as to safeguard human lives and a committee was appointed to advise the Government. The committee expressed the opinion that a mining law was necessary and that it should be as short and simple as possible and it should give the Governor General in Council sufficient powers to make rules and to exempt mines and persons from their procedure when necessary.

In 1899 the first Indian Mines bill was introduced in the Legislative Council by the Hon'ble ^{Indian Mines Act of 1901.} Mr. Rivaz. In the course of his speech he observed: "The mining industry in India is of comparatively recent origin, but its progress at least in one province has been so rapid that the necessity for obtaining for the Government statutory powers of inspection of mines, for enforcing proper precautions in their working, and for assuring health and protection of life and limb to the operatives has been repeatedly under the consideration of the Government." The proposed bill dealt with two questions—technical management and employment of children and women below ground. The bill provided that children should not be employed underground unless of the age of ten or upwards and that children between the age of 4 and 10 should not be allowed to go underground.

The bill also contemplated to empower the Government of India or the Local Government to make rules in respect of all mines or of particular classes of mines for prohibiting,

¹ Proceedings of the Legislative Council of the Governor General, 1899, p. 186.

restricting or regulating the employment of children or of women and of limiting the hours of employment of children. The criticisms on the bill were directed to two points :—(1) to the alleged unnecessary stringency of the provisions which dealt with the question of restricting and regulating the admission and employment of children and women in mines and (2) to the extensive rule-making power which was reserved to the executive government. The clauses relating to the prohibition of the employment of children below ten in mines underground were omitted in deference to representations made on the subject. It was the question of rule-making powers to prohibit or regulate the employment of women or children below ground where such employment was dangerous to life, that was strongly opposed by the mining interest. The representatives of the mining industry regarded the bill as an inevitable result of the convention of modern times. " There is legislation at home and so to be in the fashion we must have legislation here." ¹ Strong objections were taken against the rule-making power. It was urged that this would leave too much to the discretion of the executive Government. If legislation be undertaken all the regulations should be definitely incorporated in the Act. The Hon'ble Mr. Rivaz replied " that the mining conditions vary so greatly in India, and the mining industry is in a state of such rapid development, that unless large discretionary powers are left to the Government, either the whole mining industry must be unnecessarily stretched on a Procrustean bed or defenceless classes must go without protection." ² It was pointed out that any attempt to secure absolute uniformity of equipment and management would be detrimental to the mining industry. Further, if there were mistakes in the legislation, the owners and managers

¹ Governor General's Legislative Council Proceedings, pp. 201-02.

² Governor General's Legislative Council Proceedings, 1899, p. 190.

of mines might be subjected to considerable inconvenience and trouble before they could be corrected by the employment of the machinery of legislature. On the other hand, if the industry was regulated by rules they might be promptly amended or modified as necessity arose. There was also a material safeguard against hasty or ill-considered use of the rule-making power in that Mining Boards should be created on which the mine-owners would be represented and to which all rules were to be referred before they were published for criticism before enforcement. Lord Curzon, in summing up the debate on the bill, observed : "A bill for the regulation and inspection of mines is, in my opinion, nowhere more needed than in this country, and ample vindication of this proposition might, I think, be found in the general as distinct from the particular circumstances of the case."¹ An inquiry conducted by an expert disclosed an utter disregard for human life, partly from ignorance and partly from carelessness. He found 250 people (men, women and children) at work where the ventilation was nil, the air as foul in the extreme with smoke and gases, and the conditions as unfit for human existence. In another case he found that three deaths had been caused by a fall of overhanging sandstone, due to incompetent management and the lives of 65 other persons were in jeopardy from the same cause. In two other gaseous mines, where the managers were absent, and incompetent substitutes had been left in charge, he found large fires kindled in the working galleries, and naked lights suspended from the roof where the cutting was going on. In view of this description of the management of Indian mines His Excellency remarked : "Is it to be conceived that alone in India, of all countries in the world, the Government is to stand aloof and allow mines to be dug and hundreds and thousands of

¹ *Ibid.*, p. 202.

its subjects to be employed in an occupation, at all times severe, and sometimes perilous, without intervening to ensure that reasonable protection shall be afforded to life and limb, and that adequate safeguards shall be instituted for inspection, supervision and control." ¹

The first Indian mines bill was passed as the Indian Mines Act of 1901 in spite of the opposition of the mining interest. It was a modest measure, as it merely provided for the inspection and management of mines. It left unsettled the vital question of the prohibition of the underground employment of women and children. The Act simply empowered the Chief Inspector of Mines or any other Inspector to prohibit such employment if it was found to be dangerous to life and limb. But even in such a case if there was a difference of opinion between the Inspector and the owner of mine, the matter was to be referred to a Committee. The Act also provided for the appointment of competent managers. For the regulation of operations in the mine, Government were empowered to make rules and all rules were to be referred to a Mining Board created by the Act. Thus the Act succeeded in establishing the principle of regulation of a hazardous industry.

¹ Governor General's Legislative Council Proceedings, 1899. pp. 228-24.

CHAPTER VIII

POST-WAR LABOUR LEGISLATION

The last war produced effects of a far-reaching character on almost every sphere of life—political, social and economic. But its economic effects surpassed any others. It brought in its train phenomena which have not been experienced since the days of the French Revolution. It gave a rude shock to the confidence which men possessed in the old order of things. Serious doubts were entertained in the efficacy and soundness of the institutions that regulated the economic life of every country. Men began to concentrate their attention and thought upon the various schemes of reconstruction. We are not concerned in this chapter with all the economic effects which the war produced but only those that affected the life of the labourer. The war imposed a serious strain upon the labouring population of every country. Vigorous efforts were demanded from the productive equipment of every belligerent country and its labour force to make goods and services suitable for the prosecution of the war. The labour and capital for the time forgot their class consciousness in order to bring the war to a successful issue. The demand for increased production was so great that not only men but also women, young persons and children worked for long periods during hours that were not permissible under normal conditions. Labour laws and trade union agreements had to be kept in abeyance. In Great Britain, the Government had to enter into negotiations with the representatives of organised labour respecting the conditions under which work was to

Influence of the
European war upon
labour movements.

be carried on. Labour organisations during the war period assumed an importance which was unknown before. In 1916 and 1917 they held international conferences to formulate their own "peace demands." In the Berne Conference in 1917, the representatives of labour from different countries expressed the opinion that provision should be made in the Peace Treaty for the promotion and enforcement of international protective labour legislation. In the Inter-Allied Labour Conference held in London in September, 1918, an international labour conference in connection with the Peace Conference was advocated.

The demand for the international protection of labour was not the direct outcome of the war. Even, before the war, for over three decades, there were demands to humanise the conditions of labour by an international agreement. The first successful international labour conference was held in 1890 in Berlin. Conferences were also held in 1897 at Zurich and at Brussels and in 1900 in Paris. In 1905 the Swiss Government called an official international labour conference at Berne in which conventions were formulated respecting the use of white phosphorous in the match industry and the employment of women in night work. Conferences were also arranged at different places by the Association for Labour Legislation. The second conference at Berne in 1913 decided upon drafts of international agreements to prohibit night work for young persons under sixteen and to establish a maximum working day of ten hours for women and young persons. It is thus clear that even before the war the influence of international action on labour legislation was felt.

In the Treaty of Versailles it was provided among other matters that the Members of the League of Nations. "will endeavour to secure and maintain fair and humane conditions of labour for men, women and

children both in their own countries and in all countries to which their commercial and industrial relations extend and for that purpose will establish and maintain the necessary international organisations.”¹

Part III of the Peace Treaty dealt with labour. It was laid down that an international machinery should be set up to regulate the employment of labour in different countries. The need for such a machinery was set forth in the Preamble—Whereas the League of Nations has for its object the establishment of universal peace, and such a peace can be established if it is based upon social justice.

And whereas conditions of labour exist involving such injustice, hardship and privation to large numbers of people as to produce unrest so great that the peace and harmony of the world are imperilled; and an improvement of those conditions is urgently required; as for example, by the regulation of the hours of work, including the establishment of a maximum working day and week, the regulation of the labour supply, the prevention of unemployment, the provision of an adequate living wage, the protection of the worker against sickness, disease and injury arising out of his employment, the protection of children, young persons and women, provision for old age and injury, protection of the interests of workers when employed in countries other than their own, recognition of the principle of freedom of association, the organisation of vocational and technical education and other measures.

Whereas also the failure of any nation to adopt humane conditions of labour is an obstacle in the way of other nations which desire to improve the conditions in their own countries :

The High Contracting Parties, moved by sentiments of justice and humanity, as well as by the desire to secure the

¹ Part I of the Peace Treaty, Article 22.

permanent peace of the world agree to the establishment of a permanent organisation which shall consist of (a) General Conference of representatives of the Members and (b) an International Labour Office.

The treaty also laid down certain general principles for regulating labour conditions which all industrial communities should endeavour to apply, so far as their special circumstances would permit. These principles are :

(1) That labour should not be regarded merely as a commodity or article of commerce.

(2) The right of association for all lawful purposes by the employed as well as by the employers.

(3) The payment to the employed of a wage adequate to maintain a reasonable standard of life as this is understood in their time and country.

(4) The adoption of an eight hours day or a forty-eight hour week as the standard to be aimed at where it has not already been attained.

(5) The adoption of a weekly rest of at least 24 hours, which should include Sunday wherever practicable.

(6) The abolition of child labour and the imposition of such limitation on the labour of young persons as shall permit the continuation of their education and assure their physical development.

(7) The principle that men and women should receive equal remuneration for work of equal value.

(8) The standard set by law in each country with respect to the conditions of labour should have due regard to the equitable economic treatment of all workers lawfully resident therein.

• (9) Each state should make provision for a system of inspection in which women should take part, in order to ensure the enforcement of the laws and regulations for the protection of the employed.

The first General Conference met at Washington on the 29th October, 1919, to discuss the draft conventions and recommendations dealing with labour. The Conference adopted certain conventions and made some recommendations to improve the conditions of employment of labour, which were based on the principles enumerated above. The following were the important conventions :

(1) The working hours of persons employed in any public or private industrial undertaking shall not exceed eight in the day and forty-eight in the week. Two important exceptions are allowed to this general principle. In the first place, it is provided that the limit of work prescribed in this convention may be exceeded in those processes which are required by reason of the nature of the process to be carried on continuously by a succession of shifts, subject to the condition that the working hours shall not exceed fifty-six in the week on the average. In the second place the 48-hour rule should not be applicable in the case of countries in which climatic conditions render the industrial efficiency of workers substantially different. Article 10 provided that in British India the principle of a sixty-hour week shall be adopted for all workers. With regard to employment in mines it was recommended that it should be possible at an early date to limit the hours of underground work in mines to 54 or even lower.

(2) In any public or private industrial or commercial undertaking a woman—

(a) shall not be permitted to work during the six weeks following her confinement,

(b) shall have the right to leave her work, if she produces a medical certificate stating that her confinement will probably take place within six weeks,

(c) Shall, while she is absent from her work in pursuance of paragraphs (a) and (b), be paid benefits sufficient for full and healthy maintenance of herself and her child, provided either out of public funds or by means of a system of insurance and as an additional benefit shall be entitled to free attendance by a doctor or certified midwife. With regard to the question of granting maternity benefits in India, the Conference adopted the motion "That the Indian Government be requested to make a study of the question of the employment of women before and after confinement and of maternity benefits before the next conference and to report on these matters to the next conference."

(3) Women without distinction of age shall not be employed during the night in any public or private undertaking. In India the application of this convention may be suspended by the Government in respect to any industrial undertaking, except factories as defined by the national law.

(4) Children under the age of fourteen years shall not be employed or work in any public or private industrial undertaking. This provision shall not apply to India but in India children under twelve years of age shall not be employed.

(5) Young persons under eighteen years of age shall not be employed during the night in any public or private industrial undertaking but young persons over sixteen may be employed in some specified industries in which by reason of the nature of the process work is required to be carried on continuously day and night. In the application of this convention, the term industrial undertaking includes only such factories as come under the operation of the Indian Factories Act and the convention applies only to males of less than 14 years of age and females of less than 18 years.

(6) Each member shall establish a system of free public employment agencies under the control of a central authority. Benefits under a system of unemployment insurance

should be extended to workers in a country, who are the subjects of another State.

In addition to these conventions, the Conference made a number of recommendations regarding the establishment of an effective system of employment insurance, the protection of women and children against lead poisoning, reciprocity of treatment of foreign workers, the establishment of Government health services and the prohibition of the use of white phosphorus in the manufacture of matches.

These conventions and recommendations profoundly modified the labour laws of different countries that ratified them. India as a member of the League had to ratify the conventions of the Washington Labour Conference. The demand for a modification of the labour laws in India came also from the workers. The war brought about hardships of an unprecedented nature. Prices rose to an unparalleled height but wages did not rise in the same proportion. The employers earned phenomenal profits but the lot of the labourer was a tale of distress. So long as the war lasted the rise in prices was regarded as temporary, but when with the cessation of the war the prices did not fall but on the contrary rose, the workers found themselves in a desperate position. In all the provinces industrial unrest spread with rapidity. In 1920 an epidemic of strikes unprecedented in the history of the province broke out in Bengal. These strikes arose mainly from a demand for higher wages. In the same year there were strikes in Bombay, Ahmedabad and Cawnpore among the textile workers. The operatives in these strikes demanded a ten-hour day and the Bombay Millowner's Association expressed their readiness to work their mills ten hours a day with one shift. The contagion of strike spread to Railways and other industries.

These industrial disputes and India's representation as a member of the League of Nations spurred the Government to adopt a definite policy in regard to labour. In the Conference of the Directors of Industry in April, 1920, the future policy relating to labour was discussed. The questions referred to the Conference were

Conference of Directors of Industries.

(1) Should any machinery be set up in each province by the Government to deal with labour disputes ;

(2) Should the Government of India intervene in such disputes ; if so, at what stage ?

(3) Should the Government participate in any way in the preliminary work of the organisation of Trade Unions ; if so, what action should be taken ?

(4) What should be the actual lines on which such organisations should take place ?

(5) Until these organisations come into being, how should the Government of India select a delegate and advisers to represent the working classes at meetings of the International Labour Conference ?

It was suggested that some local machinery should be set up on the lines of the British Industrial Courts Act, 1919, but it was held by local Governments that such legislation would be premature in view of the existing labour conditions in India.

But, it was the Conventions adopted at the Washington Labour Conference that induced the Government of India to undertake fresh legislation to ameliorate the conditions of labour. In their despatch to the Secretary of State for India, dated the 25th November, 1920, the Government of India wrote : " The Conventions have been framed, on the whole, in a reasonable spirit and apart from our natural desire to avoid alienating opinion abroad, we believe that, with the exceptions noted below, their rati-

Influence of Washington Labour Conventions upon Indian Labour Legislation.

fication will be beneficial to the interests of Indian industry and labour." It is worth noting that some of these conventions were already provided for in the Indian Factories Act of 1911. With regard to the convention relating to the night work of young persons it is pointed out that by Sections 23 and 24 of the Indian Factories Act of 1911 they were protected. The same Act also prohibited the night work of women in industrial undertakings except mines. The principle of sixty-hour week was generally accepted by the mercantile community in all provinces. But the Bengal Chamber of Commerce was opposed to the limitation of the working day to 10 hours. The Chamber expressed the view that law should provide for elasticity in the local application of the principle of the sixty-hour week. Further, with regard to the hours of labour of men and women the Government of India were of opinion that "differentiation between men and women, though reasonable with a working day of 12 hours in the case of men, may not be justified with an average working day of ten hours, and such differentiation may introduce complications in the working of the shift system in industries in which both men and women are employed."¹ The Government of Bengal pointed out that "the consensus of opinion was that the working hours should be the same for men and women, and that there should be no differentiation in this respect between the sexes."² It was further urged that there should be no discrimination between textile and other factories as regards the employment of labour.

The convention relating to the minimum age for admission of children to industry raised a considerable amount of controversy. The Indian Mining Association in their letters to the Government of Bengal held the view that

¹ Letter of the Government of India to Local Governments, 11th May, 1920.

² Letter of the Government of Bengal to the Government of India, 2nd October, 1920.

"As regards the minimum age for admission of children to employment in mines it is very difficult to lay down hard and fast rules. The general practice is that children go down the mines with their parents from a very early age. From about the age of eleven a child becomes a recognised worker and this should be the age at which children would be allowed to become enrolled in a colliery pay sheet and earn wages for their labour." The Committee of the Bengal Chamber of Commerce were unanimously of the opinion that this draft convention should not be ratified by the Government of India. "So long as there is no system of compulsory education in force in India, the Committee consider that nine years is not too young an age for children here to commence work. In their opinion more harm to the moral and physical welfare of children of that age in India is likely to result from allowing them to run loose in crowded mill area, than can possibly arise from their employment for six hours daily on light work in well ordered factories."¹ The Governor-in-Council of Bombay while accepting the principle that the present minimum age of nine years was too low, laid emphasis on practical difficulties which stood in its way. "Any abrupt alteration of the existing conditions might be misinterpreted politically as an attempt to handicap Indian industry for the benefit of European competitors." They also put forward the argument that compulsory education and the raising of age should go together and further, it might involve a reduction in family earnings which would be likely to lower their standard of living and might have a worse effect on the constitution of children.

With regard to the conventions relating to unemployment, the Government of India expressed the opinion that the creation of free public employment agencies in

¹ *Ibid*, p. 42.

India had hitherto been thought unnecessary, since the demand for industrial labour had for long exceeded the supply, and the unemployment of agricultural labour was unknown in ordinary seasons. But the institution of unemployment agencies might facilitate migration to areas where the demand for industrial labour is never fully met. The system of unemployment insurance was not deemed a practical proposition in India. It is during a period of famine that the problem of unemployment looms large on a large scale. For this purpose there are famine codes to relieve the initial phases of distress by opening public works and affording gratuitous relief where necessary. Another difficulty in the way of the establishment of unemployment insurance is the comparative immobility of much of the unskilled labour of the country.

The Washington Labour Conventions were ratified by the Assembly on the 19th February, 1920.

The Indian Factories
Act of 1922.

The ratification committed the Government of India to undertake the revision of the Indian Factories Act, and in 1922 the Indian Factories Act of 1911 was amended.

In accordance with the Washington Labour Convention it was provided that no person should be employed in a factory for more than 60 hours a week. The Bombay millowners in 1920 presented a memorial to the Governor General in which they pointed out that 10 hours a day was fair labour and they would agree to this, provided a similar limitation was enforced by law on textile mills in other parts of India. In Ahmedabad also a ten hours' day was granted to the operatives by the millowners. A ten hours' day was also adopted in the Buckingham and Carnatic mills in Madras, and was now the normal day in textile mills at Cawnpore, Dhariwal and Nagpur.¹ It is interesting

¹ Speech of Sir T. Holland, Legislative Assembly Debates, Vol. I.

to note that at the time of the passing of this Act, there was no argument from the standpoint of abstract right, nor was it attributed to the sinister influence of Manchester. The Indian millowners were already accustomed to the principle of limitation and regarded it as an inevitable result of the social and economic forces of the times.

The Act provided that no person should be employed in any industrial undertaking for more than 11 hours a day. This provision set the extreme limit of daily working hours. Mr. Joshi, a representative of labour in the Assembly, insisted on the limitation of ten hours, for his apprehension was that some of the mills might work five days a week and would thus defeat a ten-hour day. The Government, however, fixing the maximum limit per week left a certain amount of elasticity in its working in actual practice, specially in the case of those mills that would grant a half-holiday on Saturday. The distinction between textile and non-textile factories was done away with. The minimum age at which a child may be employed was raised from nine to twelve, and the age at which a child should be treated as an adult was raised from fourteen to fifteen. The hours of work of children were fixed at 6. It was also provided that there should be a compulsory rest (except in the case of shifts) on each working day at intervals not exceeding six hours for not less than one hour, and in the case of children working more than five hours in any day, a period of rest of not less than half an hour. In 1929 the subject of employment of factory labour in India was examined in detail by a Royal Commission. The Commission found that the hours of labour in Indian factories were excessive and recommended a reduction from 60 hours to 54 hours per week.¹ The Commission, however, found that such a sweeping change would involve an amount

¹ The labour members on the Commission wanted to reduce the hours to 48 per week.

of dislocation that would be serious. Although in the past a reduction in the hours of labour has been accompanied by a growth in the efficiency of the operatives, it does not follow, that it will always be repeated. "As hours are lessened, a point must be reached at which, even if the industry can maintain production by employing shifts, the operatives cannot face a further reduction of earning capacity."¹

The passing of the Factories Amendment Act of 1922 paved the way for the regulation of labour in the mines and a bill was introduced in the Legislative Assembly in the same year. We have seen that the Washington Labour Conference recommended a 54-hour week for underground work in the mines of India. The Indian Mines Act of 1901 did not regulate the employment of labour in mines except in special circumstances. Administrative difficulties were experienced after the Reforms Act of 1919 came into operation. Under the Devolution rules the regulation of mines is a central subject. The Act of 1901 was found defective in that it made no clear distinction between the functions of the Central Government on the one hand and those of Local Government on the other. It was therefore necessary to define the respective functions of the two Governments in regard to the administration of the Mines Act.

The provisions relating to the employment of women and children in the mines gave rise to a heated controversy. Labour leaders characterised the bill as a halting and hesitating measure. In every civilised country, they said, the employment of women in underground work in the mines was prohibited but in India alone such employment was to be permitted. Mr. Joshi regarded it as a blot on the civilisation of India and pressed for its prohibition. He observed that "the real motive of the mine-owners is that in the first place woman's labour is very cheap. In the

¹ Report of the Royal Commission on Labour, p. 48.

second place women are more docile and accept service under easier conditions." The same view was expressed by Lord Curzon in his speech on the Indian Mines Act of 1901 when he said, "I think, too, that Government should not shut its eyes to the fact that in a good many cases, the labour of women and children is really engaged, not for domestic reasons but simply for economy's sake, in other words, because it is cheaper than that of man." Sir Charles Innes apprehended that the prohibition of the employment of women in the mines would ruin the mining industry. "It must be remembered," he observed, "if by premature legislative changes, we dislocate a key industry, it is the Government of India and this Assembly that will take the responsibility." An analogy was drawn between the provisions of the Factory Act and the Mines Act and it was pointed out that the miners would be at a disadvantage in comparison with the factory operatives. Government did not limit the number of hours per day as they did in the Factory Act. Nor did they put any limit upon the hours of work of young persons and women. Mining work is carried on in far more uncongenial surroundings than factory work and is far more hazardous than mill work. It therefore required to be regulated more stringently than any other kind of work. It was thought surprising that the attitude of the Government of India to this industry was different from their attitude to factory work. But the analogy with the factory work is not valid. The conditions of labour in mines and the conditions of labour in factories are different problems. The operatives in mines are not driven to work as in a factory. They work under a system of piece work and they can take their hours as will suit their interest best. The Government of Bihar and Orissa were opposed to a stringent regulation of mining labour.¹ It

¹ Letter of the Government of Bihar and Orissa, dated the 16th August, 1920.

was apprehended that any attempt suddenly to regularise the daily hours of labour might dislocate the coal trade and cause disastrous reactions on other industries.

With regard to the employment of children in mines the Government of Bengal suggested the minimum age of 12 years though the Indian Mining Association would have 11 years. The prohibition of the employment of children in mines would indirectly diminish the employment of women. Sir Charles Innes suggested in the bill that children up to the age of 13 should not merely be prohibited from being employed in mines but they should not be allowed to be present in mines at all. The effect of the proposal might be to reduce the employment of women in mines and it was thought to be the first step towards the prohibition of the employment of women in mines. The Joint Committee on the bill accepted the principle of the prohibition of the employment of women underground and recommended to the Government of India to take up this question with the Local Governments in order that the total prohibition of women on underground employment should be accomplished within five years' time. Under the Act of 1901 the Government of India possessed powers to make regulations for the prohibition of the employment of women underground but these powers were not exercised. In 1929 after long discussion with the Provincial Governments the Government of India made regulations to exclude women from underground workings forthwith, except in exempted mines, *i.e.*, except in coal mines and in salt mines. In these exempted mines, the exclusion is to be gradual; the employment of women underground after 1st July, 1929 was limited to a percentage of the total underground labour force, 29% in coal mines and 40% in salt to be reduced by 3% and 4% respectively each year so that after 1st July, 1939 women will be entirely excluded from underground workings.

The Act of 1923, however, substantially improved the

conditions of work in the mines. Work above ground was limited to 60 hours a week as in the case of factories. In underground work the limit of working hours was fixed at 54 per week. Children below the age of 13 are not permitted to work underground.

Another measure of far-reaching importance, that was passed in 1923, was the Workmen's Compensation Act. One important feature of the modern industrial system is that the labourers are exposed to grave risks of life in the course of their employment. Every year in Europe and America four or five million workers meet with accidents in the course of their work. One workman in every twenty-four was certain to meet with an accident during the year.

The Workmen's
Compensation Act of
1923. Machinery, however carefully driven, very often causes serious injury to the life and limb of the operatives. The boiler may burst, the mill gearing might give way or there may be an explosion in a mine and in hundreds of different ways the lives of the operatives are exposed to risk. It has been realised in western countries that if the industrial system exposed the operatives to the risks of accident, measures are called for to make provision against such risks. It is distressing to find that when the bread winner is either disabled or killed in an accident his dependants are helpless. The society in the interests of justice is bound to step in and fix the responsibility on the party that employs labour. This principle of liability of the employers had to be fought out by vigorous agitation in western countries. In England prior to the Employers' Liability Act of 1880, the law on the subject was anomalous. If any employee received any injury in the course of employment from a fellow employee there was no redress, because it was urged that the employees took the responsibility of accidents themselves. The doctrine of common employment was urged as an argument for exonerating the employers from

any liability of this nature. But if a third person was injured he was entitled to be compensated by the employer. The anomaly of this law can be made clear by an example. If owing to the negligence of the pointsman in a railway a collision occurred, the passengers injured were entitled to compensation but the guards, drivers and other employees injured had no right to compensation. This anomaly was removed by making the employers liable to their employees in case they were injured in an accident by the Employers Liability Act of 1880. But up to the year 1897 when the Workmen's Compensation Act was passed in Great Britain no workman had any legal right to compensation unless he could prove negligence on the part of his employer and his employer could defeat his claim by showing that he had by his own negligence contributed to the accident.

The Act of 1897 introduced the principle that an employer must, subject to certain limitations, insure his workmen against the risks of their employment. At the same time the right of a workman to bargain away his claim to compensation was taken away. The rights of workmen in regard to compensation for accidents have become a matter not of contract, but of status.

The principle of this law has been adopted by other countries also. The law in almost all the countries on this subject defines compensative incapacity as incapacity for work and the test for the existence of incapacity is that the earning capacity of the worker has been reduced. The degree of incapacity for work and the corresponding amount of compensation are calculated according to the reduction in the workers' earnings or earning capacity after the accident. It must, however, be observed that it is very often difficult to determine exactly the reduction in earning capacity and the application of the law must in some degree be arbitrary. But it must be admitted that this law has produced a sense

of economic security in the minds of the workers of those countries that have adopted it.

In India it was the Washington Labour Conference that induced the Government to take up the question of workmen's compensation. Sir Charles Innes in moving the Workmen's Compensation Bill observed: "India is a member of the League of Nations. The representatives of its workers almost annually meet the representatives of workers of other countries at the Conferences of the International Labour Organisation, and the time has ceased when India could claim to stand aloof from labour movements which have affected the whole of the civilised world. India stands almost alone at the present day in not having an Act of this kind." But the idea of workmen's compensation can be traced long before the Washington Conference. The demand for workmen's compensation dates back in India as far as 1884 when a mass meeting of mill hands in Bombay passed unanimously a resolution claiming compensation for injuries received in the course of work. In the petition of the Bombay cotton mill operatives submitted to the Governor General in 1889, among other demands they insisted "That a workman sustaining serious injury in the course of his work at the mill, which may disable him for a time, should receive full wages until he recovers and that in case of his being maimed for life, suitable provision be made

Year	Number of accidents actually recorded.			Total,	Number of persons injured per every 100,000 employed.
	Fatal.	Serious.	Minor.		
1892	81	318	1,020	1,369	432
1900	62	435	1,646	2,143	457
1910	139	886	3,354	4,379	553
1915	115	923	4,414	5,452	542
1919	145	957	4,321	5,423	463

¹ Legislative Assembly Debates, Vol. II—Speech of Sir Charles Innes, 13th September, 1922.

for his livelihood." A reference to the figures of accidents shows that up to 1915, the number of accidents was increasing.¹

Though the Indian Factories Act provided for adequate safeguards, it was found that the risks of accident could not be entirely eliminated from the industrial system, and at the same time it was necessary that such a large number of people could not be left unprovided. The Workmen's Compensation Act is not to be regarded as a "philanthropic measure." It is a sound investment and would confer benefits on Indian employers. Sir Charles Innes pointed out that Indian employers experienced difficulties in obtaining a steady and adequate supply of labour, and one of the causes of these difficulties was a sense of insecurity to life and limb felt by the staff. The bill was designed to remedy that difficulty and however partial its effects might be "it would confer an advantage on the country at large." It was also urged that a sense of security would always make a man better worker and would thus tend to increase the efficiency of Indian labour. Another advantage claimed for legislation of this type is that by increasing the importance for the employer, of adequate safety devices, it will reduce the number of accidents in a manner that cannot be achieved by official inspection. But an Act of this type had required to be passed with due caution. The operatives were mostly illiterate and careless and there was consequently the danger of imposing an undue burden upon nascent industries. This note of warning was sounded by Rao Bahadur T. Rangachariar when he said, "England took more than a century to enact her Workmen's Compensation Act. India has yet to begin her industrial career, and before we are yet on our feet, these fetters are put upon our industries. But I welcome the measure in the hope that it will be liberally

¹ Bulletin of Indian Industries and Labour, No. 8, p. 48.

administered." The history of labour legislation in England discloses a process of painful evolution and in that process a legacy of class bitterness has been left and it was hoped a timely measure of this kind would avoid that class bitterness. It is recognised that industrialism and methods of social insurance and ameliorative measures must go together if there is to be harmonious development. It is better in the interests of the country that all measures which are necessary to avoid the evils of industrialism should be adopted. The employers were generally favourably disposed to the measure. Sir Alexander Murray, speaking on behalf of the employers, remarked, "We accept responsibility for accidents but with the exception of those particular accidents, *viz.*, injury to workman resulting from an accident which is directly attributable to the influence of drink or drugs, wilful disobedience or wilful removal of safety devices."¹

The bill was sharply criticised in that it did not make any provision to help the widow and children of a workman when he dies on account of an accident although the accident might have been caused by his wilful misconduct. But it must be observed that this criticism cannot be rationally maintained. Nobody can have a right to a claim which could not have been exercised by the injured man or the deceased. Further, the powers given to the Commissioner for the administration of the Act were regarded as too extensive. The creation of a separate authority to adjudicate claims under this Act was not approved by the public. Sir Charles Innes, however, pointed out that "Workers in India are poor ; and therefore if we make our machinery too elaborate, if we put obstacles and any large expense in the way of their getting compensation, the bill will not help them, on the contrary, it may hurt them." The idea was to minimise the temptation to litigation as much as possible.

¹ Speech of Sir A. Murray, in the Council of State, 20th February, 1923.

Section 4 of the bill laid down the scale of compensation.

A. Where death results from the injury—

(i) in the case of an adult, a sum equal to 30 months' wages or two thousand five hundred rupees, whichever is less, and

(ii) in the case of a minor two hundred rupees.

B. Where permanent total disablement results from the injury—

(i) in the case of an adult, a sum equal to 42 months' wages, or three thousand five hundred rupees, whichever is less, and

(ii) in the case of a minor, a sum equal to 84 months' wages or three thousand five hundred rupees, whichever is less.

C. Where permanent partial disablement results from the injury—

(i) in the case of an injury specified in schedule I, such percentage of the compensation which would have been payable in the case of permanent total disablement as is specified therein as being the percentage of the loss of earning capacity caused by that injury, and

(ii) in the case of an injury not specified in schedule I, such percentage of the compensation payable in the case of permanent total disablement as is proportionate to the loss of earning capacity permanently caused by the injury. Three specified forms of misconduct are mentioned in the Indian Act which disqualify a workman to claim compensation, *viz.*, if the accident takes place under the influence of drink or drugs, wilful disobedience of a rule or order expressly made for the safety of workmen, and wilful removal or disregard of a safety guard or other device. Mr. Lethbridge, Commissioner, Workmen's Compensation, Bengal, expressed the view that "These provisions are clear and easy to apply, and they may be good for discipline but from the modern

point of view they are somewhat stringent. The provisions of this kind are a survival of the common law idea, viz., no redress for a loss due to the plaintiff's own fault. When it is realised, first how large a part conditions of work play in these accidents, and secondly that the workman bears most of the burden even if he is compensated, perhaps the principle of occupational risk will prevail." ¹ The laws of most other countries are more comprehensive and there has been a general tendency in recent years to abandon all limitations. The Conference at Geneva in 1925 framed a draft convention on Workmen's Compensation which, as a whole, is in advance of the existing law of any country but there is no practical possibility that the Indian law will be brought into line with this draft convention for many years to come. The provision of a lump sum to an operative has the danger that it might be frittered away. Advanced opinion, looking to the interest of the worker, favours periodical payments, and the Geneva Conference have adopted them. But in India the difficulty in adopting this system is that the Indian workman is migratory. The Workmen's Compensation Act has undoubtedly removed a serious grievance of the operatives but the full advantage from the Act will not be secured unless the operatives are enlightened on the subject. Among

The Trade Union
Act, 1926.

the legislative measures passed by the Government of India, none is so far-reaching and epoch-making in character as the Trade Union Act of 1926. The history of Trade Union legislation in India is not marked by such sensational events as form landmarks in the economic history of Great Britain. In that country the struggle between labour and capital covering a period of over three quarters of a century resulted in legislative recognition to trade unions as an

¹ Lethbridge, Lecture before the Rotary Club, 20th September, 1927.

Mr. Lethbridge points out that in Bengal out of over 8,000 accidents there were only 60 applications.

integral part of the modern industrial organisation. The development of the capitalistic system of industries resulted in an impersonal relation between the employers and the employees in which competition and contract were the dominating factors. In the application of the principle of competition the workers found their position growing worse. The employers had often a tacit understanding among themselves but the employees were at the mercy of the employers and their helpless situation compelled them to accept terms dictated by their employers. The labourers realised that individually they were powerless but when united they could make their demands effective and fix the terms of employment to their advantage. It was the necessity for collective bargaining that gave an impetus to the trade union movement. A trade union has been defined by Webb as "a continuous association of the wage-earners for the improvement of their condition."¹ Such an association gradually became a recognised body with which the employers could bargain regarding the terms and the conditions of employment. Not only did such an organisation look to the interests of its members, but a solidarity of the interests of labour as a whole found expression in federations and congresses. The Trade Disputes Act of 1906 is regarded as the charter of trade unionism which defined in unmistakable terms the rights and obligations of the members of a trade union. So phenomenal has been the growth of unions in England that between 1900 and 1920 membership of trade unions rose from 2 millions to 9·6 millions.²

In India the trade union movement is a recent growth.

Trade Union—
recent growth.

In the Memorandum prepared by the Government of India for submission to the British Commission on Labour in 1892, there is no reference to trade unionism.

¹ Webb, *History of Trade Unionism*, p. 1.

² Clay, *The Problem of Industrial Relations*, p. 143.

The earliest labour association on record is the Bombay Millhands Association but it was not a trade union in the sense in which the term is understood. This Association now and then submitted petitions to Government for the redress of the grievances of the operatives but there is no record whether it collected subscriptions or conducted any strike. Trade unionism emerged in India as the outcome of post-war economic hardships. In 1920

Origin of Trade Unions.

and 1921 the industrial life of India was convulsed by an epidemic of strikes.

During this period of economic hardship the workers in India developed a spirit of class consciousness. The demand for higher wages was the chief cause of strikes in this period and strikes were organised to enforce this demand. The concession made by the employers in Bombay, Ahmedabad and Bengal inspired hope in the minds of the workers. Trade unionism was confined not merely to industrial workers but the workers in various occupations were influenced by the new spirit. Railways, Postal, Clerical and Press operatives began to combine. This movement to combination was encouraged by many educated men who identified themselves with the interests of the workers. The conduct of strikes by educated men was greatly resented by the employers and they were stigmatised as "political agitators" whose only motive was to seek cheap distinction by embarrassing the Government. It is, however, to be observed that the operatives in India are largely illiterate and without the help and advice of educated men, it is impossible for them to resist the policy of exploitation pursued by the capitalists. The history of the

Lack of discipline and control.

Cawnpore Mazdur Sava or Labour Union shows that even when a union is controlled

by educated men it is extremely difficult to enforce discipline among the operatives. This labour Union was formed in 1919 and was registered under Act 21 of 1860. Its

origin may be traced to the strikes of December, 1919. The Millowners of Cawnpore granted some concessions to the demand for increased wages and came to an understanding with the representatives of the Sabha that the men must continue working until their grievances were inquired into and there was to be no strike unless sanctioned by the Sabha and then only after due notice. But the union was powerless to check strikes which occurred shortly after the acceptance of this principle. The Secretary to the meeting of the employers wrote to the Secretary of the Labour Union. "These strikes are directly in violation of the principle agreed to by the employers and the representatives of the Sabha. The employers of labour cannot countenance these unauthorised strikes and it will be necessary for them to take recourse to concerted action and close their mills in the event of the employees of any one mill striking without notice." That the demands of the operatives in many cases were extravagant and unreasonable can be exemplified from the activities of the Cawnpore Labour Union which formulated 21 demands in 1921. Of these demands the following are worthy of mention :—

(1) Eight hours' work and 2 annas per rupee increase in wages to make up for the reduction of time in the case of the piece workers.

(2) Enhancement of wages in proportion to the increase in the cost of living.

(3) All the employers to contribute a lac of rupees to the Co-operative Credit Bank.

(4) Minimum wage for all.

(5) Half the profits to be distributed as of right among the workmen as usual bonus.

The employers in reply pointed out that "they do not believe that the 21 new demands presented by the Mazdur Sabha represent the expressed desires of the workmen of Cawnpore. The employers are willing to recognise a re-

representative Sabha whose officials are able to control its members. The majority of demands now made are of such a nature, that the present executive of the Sabha has no sense of proportion or responsibility and the employers therefore regret that they are unable to recognise the present organisation of the Sabha as representatives of the workmen."

When the trade union movement was in a state of ferment the legal right of the workers to strike was challenged. In October, 1920

Right to strike
challenged.

Mr. B. P. Wadia who was the President of the Madras Labour Union was prosecuted. An injunction was issued against him prohibiting him from engaging in the activities of the trade unions. The charge against him was that he induced some of the workers in Buckingham Mills to commit a breach of their contract and induced others not to enter into contract of service with that Company. In this case Mr. Justice Phillips in the course of his judgment held the view that "The Committee induced the men to break their contracts, and it is a legitimate inference from the words and actions of its members, that the Committee was formed with that object and it thus formed a conspiracy of the people whose intention was to induce the work people to break this contract." The Judge was, thus, under the impression that to induce a workman to break his contract was in itself an act of conspiracy which thereby made the strike officials liable for damages. This interpretation of law made the unionists nervous and a need was felt for statutory legislation to define the rights and liabilities of trade union officials. In the first Trade Union Congress in 1920 the representatives of labour passed a resolution advocating the enactment of a trade union law in India. In the same year a deputation in London on behalf of the Workers' Welfare League waited on the Secretary of State

for India urging that the newly developed trade unions in India should be protected by legislation.

On 1st March, 1921, Mr. N. M. Joshi moved the following resolution in the Legislative Assembly : " This Assembly recommends to the Governor General-in-Council that

he should take steps to introduce at an early date, in the Indian legislature, such legislation as may be necessary for the registration of trade unions and for the protection of the trade unionists and trade union officials from civil and criminal liability for *bona fide* trade union activities."

Mr. Joshi in the debate on this resolution pointed out that trade unions were of recent growth and they were not yet put on a proper footing. The position of the trade unions in India was that in a large number of them the membership was still not large enough. In some of them even subscriptions were not regularly collected. Some of them did not even have rules framed. Their status also in the eyes of law was not well defined. It was, therefore, urged that if trade unions were desirable, efforts should be made at this stage to put these organisations on a sound and proper footing.¹ The Government of India were not opposed to the principle underlying this resolution, but pointed out that they were very few trade unions properly constituted for registration and there was no genuine desire on the part of trade union leaders for registration under the existing statutory facilities. Sir Thomas Holland held that the treaty relations with Germany and Austria committed the Government to the policy that they should recognise the right of association for all lawful purposes by the employed as well as by the employer. But in the present state of trade union organisation it was difficult to devise a legislative formula that would protect *'bona fide'* trade union

¹ Legislative Assembly Debates, Vol. I, p. 407.

activities and at the same time prevent the abuse of privileges accorded to them. The employers were in general opposed to this resolution. They regarded it not merely as premature but a very dangerous measure, and a menace to that industrial generation of India in which all were interested. They further apprehended that such an organisation would be a mere tool in the hands of irresponsible politicians. Mr. Pickford speaking on behalf of European employers observed: "We have no right to lay either the employer or the operative to the possibility of labour disputes being fomented by persons, whom under the Act which the resolution contemplates, the law could not touch or touch with great difficulty."¹ The resolution was however accepted in an amended form which was less comprehensive than the original, *viz.*, "that this Council recommends to the Governor General-in-Council that he should take steps to introduce as soon as practicable, in the Indian legislature such legislation as may be necessary for the registration of trade unions."

The development of trade unionism does not depend so much on legislation as on particular conditions. Legislation may remove certain obstacles which may stand in the way of its growth. But the need for unionism must be realised first by the operatives. As regards the conditions which make for successful and continuous association, it is to be remembered that the labourers must be a settled population. But the chief impediment in India is that the labourers are migratory. The recognition of common interest presupposes a high standard of education and discipline. The lack of these essential conditions failed to produce a genuine trade union spirit. Many strike Committees were christened as trade union organisations but as soon as the strikes failed or the demands were satisfied they lost their hold upon the

¹ Legislative Assembly Debates, Vol. I, p. 405.

people. Though the circumstances were not ripe for legislation Government introduced a bill in 1925 for the registration of properly organised trade unions. Sir B. N. Mitra introducing the bill remarked "The opinions expressed in response to the invitation of the Government were remarkable for their diversity. There were some who regarded trade unions to be dangerous and pernicious growth whose activities should be controlled rigidly. The representatives of labour regarded trade unionism as a new religion which given sufficient license would bring about the millennium more rapidly than any existing religions promise to do." The bill was a permissive measure. It was not designed to compel any trade union to register. But if any trade union was registered it was to be given a privileged position in regard to its legitimate actions and also protection of its funds against dissipation on extraneous objects. It was advocated by some that registration should be compulsory. But compulsory registration had the danger that it would mean that unregistered unions should be punished. Sir B. N. Mitra arguing against compulsory registration observed : "If a group of employees meet to discuss the hours for which their factories are to work and fail to register themselves as trade unions they must be hauled up before the criminal courts. If a number of workmen meet to present a demand for a rise in wages, they must be hunted out and brought to justice." Further, the Government decided that the funds of a trade union should not be spent on political objects. Their idea was that a trade union should further the economic interests of its members rather than their political interests. No provision was introduced to legalise picketing nor was any restriction imposed upon it. If picketing degenerated into intimidation it was left to be dealt with by the ordinary criminal law. Further, trade union - officials were to be protected against civil and criminal liability for furtherance of the

specified objects of the union. The labour leaders were dissatisfied with the provisions of the bill. They insisted on having an Act whose provisions should be the same as those of the British Trade Disputes Act of 1906. That Act gave exceptional privileges to trade union officials by providing that an act done in concert in contemplation or furtherance of a trade dispute should not be actionable if it would not have been actionable if done without concert. It also laid down that an act was not to be actionable merely by reason that it induced any person to break a contract or for being an interference with another person's trade or business or his right to dispose of his labour and capital as suited his interest. There is a general provision in that Act which explicitly provides without any qualification or exception that no civil action shall be entertained against a trade union in respect of any wrongful act committed by or on behalf of a union. It was urged that if trade unions were to discharge their legitimate functions without fear of being drawn into unnecessary litigation all the immunities that had been granted to the English trade unions should be given also to Indian trade unions. The labour leaders contended that (1) the Indian bill was defective in that it did not declare explicitly that peaceful picketing was perfectly legal.

(2) In the Indian bill civil immunity was granted to trade unions only when they took the earliest opportunity of repudiating any unauthorised acts. The bill thus provided for a limited immunity from the acts of agents done by or on behalf of trade unions. Mr. Joshi wanted that the privilege of immunity from civil and criminal liability should be extended to unregistered unions for he apprehended that the members of unregistered unions would not be immune from the law of conspiracy. The acceptance of this proposal would have made the principle of registra-

tion nugatory and it was stubbornly opposed by the Government and the employers. The clauses relating to the expenditure of the funds of a union gave rise to a serious controversy. It was provided in the bill that the funds of a union should be spent only for the benefit of the members of the union and if it spent funds for political purposes its registration would be cancelled. It was contended that the first limitation was designed to prevent the growth of a solidarity of interests of labour as a class and the second to prohibit the participation by labour in political activities. Mr. Joshi expressed the view that "A trade union is not worth having if it cannot help another trade union when it is in difficulty and it is also not worth having if it cannot fight an election on behalf of its members." The Trade Union Congress of 1925 passed resolutions to the effect that there should be no restriction on the power of the trade unions for incurring necessary expenditure. If the objects on which expenditure should be incurred are to be specified, provisions should be made enabling the trade unions to incur expenditure for assisting other unions and organisation for the promotion of the trade union movement, for contributing towards all movements for the educational, social, economical and political progress of the working classes. That the immunity provided in the bill should be extended to all unions whether registered or unregistered as is provided for in section 3 of the Conspiracy Property Protection Act of 1875, and in section V of the Trade Disputes Act of 1906. About the immunity clauses of the Trade Disputes Act of England of 1906 Sidney Webb observes : " This Act, which remains the main charter of trade unionism, explicitly declares without any qualification or exception that no civil action shall be entertained against a trade union in respect of any wrongful act committed by or on behalf of the union; an extraordinary and unlimited immunity however great may be the damage

caused, and however unwarranted the act, which most lawyers as well as employers regard as nothing less than monstrous."¹ The absolute immunity claimed by the Indian labour leaders was consequently resisted by the Government on the ground that the analogy between Indian and British conditions was not valid.

When the bill was referred to the Select Committee, the main difference arose regarding the use of union funds for political purposes and the minimum proportion in the Union Executive, of officers actually employed or engaged in an industry with which the Trade Union is concerned. The majority were of opinion that such expenditure should be allowed and it should be met not from the general funds but from a special fund contributions to which should be optional. The majority also reduced the proportion of trade union officers actually engaged in that industry from half to one-third in view of the low educational level of the ordinary labourer. Sir B. N. Mitra and three others dissented from the view taken by the majority in regard to the last provision, and observed, "We can see no justification for such a change. We recognise equally with the majority that in the infancy of the Trade Union movement in this country it may be essential for a Trade Union to have the assistance of outsiders and to include them in their executive. What the original clause was intended to secure was, that a number of the actual workers obtained all opportunity of education in the Trade Union affairs, and we regard with apprehension any change which may have the effect of restricting these opportunities." Two members objected to the optional character of contributions to the political fund. "Indian Trade Unions," they observed, "will be considerably handicapped in carrying on any propaganda for the furtherance of their political and

¹ Webb, *History of Trade Unionism*, p. 606.

civil rights." In Great Britain under the Act of 1913 trade union funds may be spent for political purposes provided such an expenditure is "approved of participation" by a majority ballot. Members not wishing to participate are allowed to contract out without prejudice to their share in its other activities.

In the debate on the report of the Select Committee Mr. Wilson representing the Associated Chambers of Commerce complained that the Select Committee had not given any consideration to the opinions expressed by commercial bodies. The bill did not prohibit picketing which led to intimidation. There was no provision in it for ensuring the proper investment of the Union funds. Lala Lajpat Rai characterised the bill as defective, unsatisfactory and unsound and he foresaw much litigation as a result of it. The labour leaders on the other hand thought that labour had got in the bill something worth having, *viz.*, the principle of immunity. The first Trade Union bill was thus passed as the Trade Union Act of 1926. The important provisions of the Act are :

1. Every registered Union shall be a body corporate by the name under which it is registered.

2. The general funds of a registered Trade Union shall not be spent on any other objects than the following, *viz.*,

- (a) The payment of salaries, allowances and expenses to officers.

- (b) The payment of expenses for the administration of the Trade Union including audit of the accounts of the general funds of the Trade Union.

- (c) The prosecution or defence of any legal proceeding to which a Trade Union or any member thereof is a party when such prosecution or defence is undertaken for the purpose of securing or protecting any rights of Trade Union as such.

- (d) The conduct of trade disputes on behalf of the Trade Union or any member thereof.

(e) The compensation of members for loss arising out of trade disputes.

(f) The issue of or the undertaking of liability under policies of assurance on the lives of members.

(g) Allowances to members or their dependants on account of death, old age, sickness, accidents or unemployment of such members.

(h) The payment of any contribution to any cause intended to benefit workmen in general.

3. A registered Trade Union may constitute a separate fund from contributions separately levied for or made to that fund, for which payments may be made, for the promotion of the civic and political interests of its members in furtherance of the objects specified in sub-section (2). These objects are (i) Election expenses, (ii) the holding of any meeting for election purpose, (iii) the maintenance of any person who is a member of any legislative body, (iv) the registration of electors, (v) the holding of political meetings of any kind.

4. No member shall be compelled to contribute to the political fund and the contribution to that fund shall not be made a condition for admission to the Trade Union.

5. There will be no criminal liability in respect of any agreement made between members for furthering any specified object of the Union.

6. No suit or legal proceeding shall be maintainable in any civil court against any registered Trade Union or any officer or member thereof in respect of any act done in contemplation of furtherance of a trade dispute.

7. A registered Union shall not be liable in any Civil Court for any unauthorised act done by its agent.

8. Not less than one half of the total number of the officers of any registered Union shall be persons actually.

engaged or employed in an industry with which the Trade Union is connected.

Another Act that has been recently passed in India is the Trade Disputes Act of 1929. Before the war industrial disputes in India were of rare occurrence. This was perhaps due to the fact that economic change was slow and gradual, and the industrial workers who were mostly accustomed to the existing standards of wages and conditions of employment did not feel the necessity of strikes. Even when a strike or a lock-out was declared it was due mainly to causes of a noneconomic nature such as discipline or maltreatment by foremen or supervisors. The war, however, brought about a catastrophic economic change. The rise in prices was so phenomenal that it entailed considerable hardship to the labouring class owing to the tardy rise of wages in conformity with the cost of living. This economic discontent is the main spring of industrial upheaval in India during the war period. Educated Indians interested in the welfare of labourers impressed upon them that by suitable organisation and strikes they might fight their employers and improve their economic condition. The resulting consequence was that strikes became an important feature of the post-war economic life of India.

Industrial disputes affected all the centres of industry but the cotton industry of Bombay has been the worst sufferer from frequent strikes and lock-outs.¹

The following table indicates the extent of strikes in the different industrial centres of India.

¹ Vera Annesly, *Economic Development of India*, p. 533.

	Number of disputes	Number of work people	Days lost in millions	Principal Provinces involved (number of disputes)
1921-22	394	511,000	6·6	Bombay 156 Bengal 160 Madras 21
1922-23	284	435,000	3·9	Bombay 145 Bengal 93 U. P. 12
1923-24	211	288,000	4·8	Bombay 107 Bengal 67 Madras 14
1924-25	133	312,000	8·7	
1925-26	134	270,000	12·5	
1926-27	128	186,811	1·1	
1927-28	129	131,655	2·2	

It requires no elaborate argument to demonstrate the loss suffered, both by employers and employees, from frequent stoppage of the industrial machinery. Modern trade disputes are conducted on such a big scale that not only are capital and labour involved but the community is subjected to risk and inconvenience when vital industries are affected and essential services are interrupted. The post-war development of industrial disputes has dispelled the notion once common, that industrial disputes are the private affairs of the parties engaged in them. The Western world is exploring various avenues for the establishment of industrial peace and devising machinery for the settlement of industrial differences. In the current century employers and employees are paying tribute to the idea of arbitration and conciliation as the means of settling industrial differences rather than strikes and lock-outs—the recognised weapons of fight. In 1919 Great Britain passed the Industrial Courts Act which provided for

the reference of industrial disputes to a tribunal set up by the Government.¹ Though the award of this Court was not legally enforceable, it was thought that public opinion would be alienated from the party that showed an unjustifiable attitude.

With the passing of the Industrial Courts Act in Great Britain, the Government of India contemplated the establishment of an analogous machinery in India. The local Governments, however, did not approve of the proposal as the industrial conditions of India were widely divergent from those prevalent in Great Britain.¹

On the 30th July, 1921 a Bombay millowner, Mr. J. B. Petit, carried a resolution in the Bombay Legislative Council asking for the appointment of a Committee to consider and report upon the practicability or otherwise of creating suitable machinery for the prevention and early settlement of labour disputes. This Committee recommended the setting up of Courts of Enquiry and Conciliation Boards composed of three members from each side, with a neutral Chairman selected from a panel maintained in the Labour office. It was expected that after the enquiry, public opinion would have some effect, but in case it did not, the Conciliation Board was to be brought into use. Such Courts were to be given a statutory authority but their decrees were not proposed to be mandatory. In Bengal also a Committee on industrial unrest recommended the establishment of Boards of Conciliation for public utility services and the formation of Works Committees. The object of the latter was to bring to the notice of the employers the grievances of the employees, so as to enable both parties to discuss mutual differences. The idea of the Panchayat as an agency for settling social and communal affairs is familiar in India and the Committee thought that a joint Works Committee

¹ R. N. Gilchrist, *Profit Sharing and Co-partnership*, p. 381.

organised on proper lines would be simply a Panchayat for regulating industrial affairs so far as they concerned themselves.¹ It is, however, to be observed that no earnest attempts were made in India for the establishment of Works Committees. The Bombay Government advocated legislation after the Canadian Act of 1907. The essential feature of this Act is that, in disputes arising in connection with certain vital industries, no strike or lock-out could be lawfully declared until the dispute had been dealt with by a Board of Conciliation and Investigation. The Act was made applicable to mines and public utility industries, including "railways, steamship, telegraph and telephone lines, gas, electric light, water and power works." The results of this Act were salutary. Sir Alfred Mond points out that 450 Boards were constituted under the Act during 1907-26 and in all but 37 of the disputes the threatened strike was averted or ended through the instrumentality of the Act.²

The Government of India at first did not approve of the suggestions made by the Government of Bombay as trade unions in India were in their infancy. The situation however became serious in 1925 when there was a strike in Bombay resisting the proposed reduction of wages. The general strike in Great Britain in 1926 was viewed with alarm and Government recognised that definite steps were imperative if serious disasters were to be averted in future.

In 1928 the Trade Disputes Bill was introduced in the Legislative Assembly. It was emphasised by the Hon'ble Mr. MacWalters that trade disputes between employers and

* ¹ Report of the Committee on Industrial Unrest in Bengal, p. 5. See R. N. Gilchrist, Profit Sharing and Co-partnership, p. 291. Mr. Gilchrist says "The hope of the Bengal Committee that Works Committees would be successful has been falsified."

² Alfred Mond, Industry and Politics, p. 132.

workmen did not concern employers and workmen only but concerned the public also and involved an obligation on Government. The object of the Bill was, therefore, to provide a machinery by which Government would be enabled to intervene as early as possible in cases of trade disputes. It was provided that the machinery might take the form of the appointment of either Courts of Enquiry or Boards of Conciliation. There is no idea of compulsory arbitration but the sole aim is to bring publicity and the force of public opinion in shortening trade disputes. The provision for two types of machinery was thought justifiable because in differing circumstances of different strikes and troubles they would require different treatment. It was recognised that greater reliance would be placed upon Boards of Conciliation formed with the aid of employers and workmen and Government, with a view to avoid suspicion and minimise resentment and discontent.

Another feature of the Bill was that a strike in a public utility service would not be legal until a month has elapsed from the announcement of its intention. This differential treatment of public utility services was based on the Canadian Act with a view to afford protection to the public. It was designed to prevent lightning strikes endangering health, safety and welfare of the community, as also to afford opportunity for settlement by enquiry and negotiations. Lastly the Bill declared a general strike illegal following the British Act of 1927 and a general strike was defined as one that had an object other than or in addition to a trade dispute with which the industry concerned and designed or calculated to coerce the Government. The Bill was welcomed by the employers but the labour leaders disapproved of some of its provisions though they accepted the principle. It was contended that under the British Industrial Courts Act, Conciliation Boards could be set up only on the application of one of the parties but in the Indian Act Government was

given the liberty and option of setting up such Boards. Further in the English Act the consent of both parties to the arbitration was required but in the Indian Act it was absent.¹ The differential treatment of the public utility industries was resented, though unreasonably. Further, the provision against a general strike was characterised as a retaliatory measure against the trade union movement and in the Indian conditions there was no emergency for a measure of this kind. It is to be observed, however, that it is more reasonable to have powers to deal with a situation beforehand rather than seek power when an emergency has actually arisen. The Bill embodying the above provisions was passed and became known as the Trade Disputes Act of 1929. With the passing of this Act an important chapter in the history of post-war labour legislation was closed. It is for the future to demonstrate what success the Act would attain in dealing with industrial strikes, but it may be hoped that labour leaders will have the good sense of taking full advantage of the Act if they desire to avert a serious situation or to minimise the severity of distress.

¹ See the Speech of Diwan Chaman Lal—Assembly Debates, 1929, p. 2675.

CHAPTER IX

ROADS AND RAILWAYS.

The development of railways is perhaps the most epoch-making event of nineteenth century India.

Roads and Railways.

No factor has so profoundly affected the economic and the social life of the country as the railways. Trietschke remarked about Germany that the railways dragged the country from economic stagnation and this view can be applied to India with greater emphasis for India is ten times as large as Germany.¹ That the different provinces of India were in economic isolation before the advent of railways is beyond dispute. The three big navigable rivers were the highways of internal trade. The roads were imperfectly developed and many of them were impassable during moonson months. On these roads the bullock carts and packhorses supplied the only means of carrying merchandise. The growing commerce of the country riveted the attention of the Government to the improvement of roads. The East India Company were interested in the export of raw cotton to China and Great Britain. There were complaints that the article suffered great deterioration in quality during transit from the interior to the port of shipment. There was another object which made the development of roads an important public question. The acquisition of territorial possessions by the East India Company raised the question of the movement of troops from one part of the Company's possession to another. In the first half of the nineteenth century the Company's engineers devoted themselves to the

construction of roads,¹ and this important branch of public works was placed under the military board.,

During the administration of Lord Dalhousie the Military Board was suppressed and the Department of Public Works was constituted. This Department undertook big projects such as the Grand Trunk Road. But with the question of railway development coming into prominence, the construction of roads became a matter of secondary and parochial importance. Attention was, however, concentrated on the construction of feeder roads and the trunk roads were in some cases allowed to go out of repair. The task of road development fell mainly on local authorities who were in many cases handicapped on account of inadequate financial resources. Nevertheless considerable progress was made in this direction. Thus in 1880 Richard Temple estimated that there were in that year no less than 20,000 miles of metalled roads in India while in 1927-28 there were 59,000 miles of surfaced roads.²

The development of large scale industries in every industrial country was conditioned by the improvement in the means of transportation and communication. The modern localisation of industries primarily depends on the rapidity and efficiency with which goods can be marketed in distant countries or localities. The industrial revolution largely hinges on the revolution in transport. In Great Britain the first phase of the industrial revolution was complete during a period when the improvement in the means of transport was effected by the construction of navigable canals. With the advent of railways, the canals lost their importance. In 1825 was opened in England the first railway—the Stockton and Darlington Railway, and in 1830 was opened the

* 1 "During the last century and prior to the introduction of railways, a number of trunk roads, bridged and metalled, were constructed and maintained under the supervision of military engineers." Report of the Road Development Committee p. 8.

² Report of the Road Development Committee, p. 9.

Manchester Liverpool Railway. The locomotive between 1830 and 1840 passed on to the Continental countries and in the early forties a railway mania developed in England.

The promoters of railways in Great Britain turned their attention to India in 1844-45, when several applications were made to the Court of Directors for the construction of railways in India. In 1845 the *First Indian Railway Company* was floated and other companies followed suit. The Court of Directors were, however, diffident about the success of railway ventures in India on economic as well as physical and other reasons. In their letter to the Government of India, dated the 7th May, 1845, they observed :

Beginnings of railways in India.

“ The advantage of railroads is available only where proportionately large returns can be obtained to meet the great expense, first of constructing and then working them. According to the experience of this country, by far the largest returns are procured from passengers, the least from the traffic of goods. The condition of India is in this respect directly the reverse of that of England. Instead of a dense and wealthy population, the people of India are poor and in many parts thinly scattered over extensive tracts of the country. But on the other hand, India abounds in valuable products of nature, which are in a great measure deprived of a profitable market by the want of cheap and expeditious means of transport.” It was, further, apprehended that there were very serious difficulties in the way of construction and maintenance of railroads in India. Periodical rains and inundations, the continued action of violent winds and the influence of a vertical sun, the ravages of insects and vermin upon timber and earthwork, the destructive effects of the spontaneous vegetation upon earth and brickwork and the lack of competent engineers were held out as so many difficulties that had to be overcome. The Court, however, admitted that wherever rail-

Early misgivings.

road communication could be advantageously introduced and maintained, it was eminently deserving of encouragement and co-operation from the Government and recommended an enquiry into the question by a competent railway engineer from Home. The Committee of engineers appointed to enquire into the feasibility of railway construction in India reported favourably. They observed that "Rail-roads are not inapplicable to the peculiarities and circumstances of India, but on the contrary are not only a great desideratum, but with proper attention can be constructed and maintained as perfectly as in any part of Europe. The great extent of its vast plains, which may in some directions be traversed for hundreds of miles without encountering any serious undulations, the small outlay required for parliamentary or legislative purposes, the low value of land, cheapness of labour, and the general facilities for procuring building materials, may all be quoted as reasons why the introduction of a system of rail-roads is applicable to India."¹ The

Demand for financial assistance.

British railway Companies, however, were unwilling to embark on railway ventures without financial assistance and the form of assistance demanded by them was that in addition to the provision of land free of cost, the Government should guarantee a fixed dividend on their capital outlay. It is, however, to be observed that the promoters of early railways in India were ignorant of the conditions of the country and the data upon which to calculate the future traffic were imperfect. The density of population in the area through which the alignments of the projected lines lay was higher than that of Great Britain, and though the people of the country were poor, there was no evidence of their disinclination to travel. As a matter of fact thousands of people undertook distant travel either for business, or for pleasure, or for pilgrimage.²

¹ Report of the Committee of Engineers, 18th March, 1846.

² Hojase Bell, *Railway Policy in India*, p. 4.

The apprehension as to the lack of passengers proved groundless even during the first three years of railway working.

The Government of India were agreeable to the construction of railways in India by jointstock companies but they were opposed to a guarantee of interest. They did not consider it expedient that Government should guarantee any amount of dividend, either while the railway was being constructed or after its completion. The concession of the land to railway companies free of cost was the most appropriate and the only kind of assistance which the Government should lend to these companies.¹ The companies might experience a considerable difficulty in the purchase of lands required for railways and this transaction could be effected cheaply and easily by the Government. Lord Hardinge however differed from the opinion of his colleagues, and was inclined to grant the companies generous concessions. He said that the assistance to be given ought not to be limited to the land. The value of land was on the average £ 200 a mile and the cost of construction would amount £ 14,000. He did not think that so small an encouragement was commensurate with the advantages which the State would derive from a rapid and daily communication to Delhi.² The Sikh wars at this time brought the question of

Influence of military considerations.

mobilisation of troops into prominence and railways began to be viewed from a military standpoint. Lord Hardinge remarked, "The facility of a rapid concentration of infantry and artillery and stores may be the cheap prevention of an insurrection, the speedy termination of a war or the safety of the Empire. I should estimate, that the value of moving troops and stores with great rapidity would be equal to the services of four regiments of infantry." On military considerations alone, the grant of one million pounds or an annual contri-

¹ Letter from the Government of India to the Court of Directors, 9th May, 1846

² Minute of Lord Hardinge, 23th July, 1846.

bution of 5 lacs of rupees may be made to the great line when completed from Calcutta to Delhi.¹

The Court of Directors were prepared to agree to a guarantee of interest but the Board of Control objected strongly to the idea of a guarantee or at least until the Directors of the East India Company were fully satisfied that the money could not be raised without it and then only for a period of fifteen years. The promoters were reluctant to accept these terms but their position was now strengthened by the representations of the various Chambers of Commerce who insisted on a speedy construction of railways. The state of the money market in England in 1847 made the raising of capital extremely difficult and the Court of Directors had to yield to more liberal terms. In 1849 the Court of Directors entered into contracts with the East Indian Railway Company and the Great Indian Peninsular Railway Company for the construction of two lines—one from Calcutta through the Gangetic plain and the other from Bombay through north-east. In 1850 Lord Dalhousie in his Minute on the subject of railway construction regarded the first railway line as a great experiment and was anxious that it should prove a commercial success so that the investment of capital in similar works in other parts of India might be encouraged. In 1852 Kennedy in a memorandum impressed upon the authorities both in England and in India “the great importance of the speedy completion of such extensive railways in India as will form a grand connected system.”² He insisted on the necessity of guarding against the “incongruous errors of isolated action” by taking from a central point of view, a survey of the Indian Empire and on formulating a complete scheme before capital was laid out.

¹ Minute of Lord Hardinge, 28th July, 1846.

² Kennedy's Memorandum.

In 1853 Lord Dalhousie in a Minute, dated the 20th April, laid down the policy to be pursued in the development of railways in India. Large tracts of land were at this time brought under the rule of the Company with the result that a pressing need arose for the consolidation of these extensive possessions. He emphasised the immense political and military advantages which would follow from the development of railways in India. "A single glance cast upon the map recalling to mind the vast extent of the empire we hold; the various classes and interests it includes, the wide distances which separate the several points at which hostile attack may at any time be expected; the expenditure of time and treasure and of life that are involved in even the ordinary routine of military movements over such a tract, and the comparative handful of men scattered over its surface, who have been the conquerors of the country and now hold it in subjection; a single glance upon these things will suffice to show how immeasurable are the political advantages to be derived from a single system of internal communication which would admit of full intelligence of every event being transmitted to the government under all circumstances at a speed exceeding fivefold its present rate."¹ Not merely was he influenced by the military and political advantages in shaping the railway policy but the commercial and social benefits which he visualised had also their share in influencing him. In the same Minute he wrote "The commercial and social advantages which the country would derive from their establishment are beyond calculation. Great tracts are teeming with produce they cannot dispose of; others are scantily bearing what they would carry in abundance if only it could be conveyed where it is needed. England is

Policy of Dalhousie

Commercial and
Social advantages

calling aloud for the cotton which India does already produce in some degree and would produce sufficient in quality and plentiful in quantity if only there were provided the fitting means of conveyance for it from distant plains to the several parts adapted for its shipment. Every increase of facilities for trade has been attended with an increased demand for articles of European produce in the distant markets of India."¹ He sketched out the trunk lines that should be constructed in India and pointed out that the selection of these lines should be dependent upon three considerations—(a) the extent of political and commercial advantages, (b) the engineering difficulties which they might present and (c) their adaptation to serve as a main channel for the reception of branch lines which may be found necessary for special public purposes or for affording the means of conveyance to particular districts.

The Government of India in accordance with the views expressed in this Minute recommended

Construction of
trunk lines.

(1) That a general system of railways connecting the several presidencies and constituting the great trunk lines within them should be sanctioned and executed without further delay. (2) That the trunk line in the Presidency of Bengal should be carried up the valley of the Ganges to Allahabad and thence up to the Doab to Agra and Delhi with a view to its being pushed through the Punjab westward. (3) That a junction line should be formed between the above mentioned trunk line and the Presidency of Bombay. (4) That a line to Khandesh and a line to Poona should be undertaken. (5) That two lines be constructed in the Presidency of Madras to connect the south of India and the west of India.²

The construction of railways in India gave rise to three important issues—the agency by which it was to

¹ Minute of Lord Dalhousie, 20th April, 1853.

² Letter from the Government of India to the Court of Directors, 4th May, 1853.

be undertaken, the financial assistance and control. It was contended by some responsible persons that railways in India should be constructed on behalf of the Government by its own officers who, it was alleged, would execute the works with greater economy, efficiency and speed, than could be done by the agents of a railway company formed in and directed from England. Lord Dalhousie favoured the construction of railways by a Company under the supervision and control of the Government. Being imbued with the ideas of *laissez faire*, he would not have a commercial undertaking under the direct management of the State. He held that the creation of great public works was no part of the proper business of a Government.¹ The question of construction of railway by the Companies being settled, the only matter of importance was how to induce the companies to invest their capital in railway undertakings in India. It has been noted before that the projectors found it impossible to raise the necessary funds for their proposed schemes without the assistance of Government. Between 1849 and 1859 eight Companies were floated under a financial arrangement which came to be known as the Guarantee System. The terms of contract under this system may be stated as follows :

(1) Land was provided by Government for all works on a lease for ninety-nine years.

(2) Interest at 5 per cent. per annum to be paid to the Company on capital paid into the Treasury for ninety-nine years.

(3) The net receipts from the railways were to be paid to the Government Treasury. If they amounted to less than the sum due for guaranteed interest the deficiency had to be made good from the revenues of India. If there was a

surplus profit after paying the interest of 5 per cent. one half of the surplus was to be applied to the repayment of the sums previously paid by the Government on account of guaranteed interest and the other half to be added to the dividend of the shareholders. If the whole of the money advanced by the Government for interest shall have been repaid and discharged, the Companies will be entitled to the whole of the profits.

(4) The Railway Companies have the power of surrendering the works at any time after any portion of the line has been open for a period of three months, upon giving six months' notice to the Government, who would have to repay the whole amount that has been expended with their sanction on the undertaking.

(5) Government has the power within six months after the expiration of 25 or 50 years from the date of the contracts, of purchasing the railway at the mean market value in London of the shares during the three previous years.

(6) At the expiration of 99 years, the land reverts to the Government and also the works if the Company do not exercise the power of surrendering before that period.

(7) The rates and fares are to be fixed with the approval of Government, and in the event of profits exceeding ten per cent. the Government can order a reduction in rates.

(8) Government to determine the route to be followed and had power to alter or to extend it.

(9) Government had the power of supervision over expenditure.

(10) The Railway Companies are bound under contract to convey the mails and Post Office servants free of charge and also military officers and soldiers at reduced rates.

The financial responsibility undertaken by the Government necessitated close control and supervision over the affairs of the Companies under such a contract. All questions of general importance had to be referred to the Government and under these were to be included, the general direction of each line, the position and the general arrangements of stations and work. All designs, estimates and indents, whether for works or for establishments were to be approved by the consulting Engineers who could reduce the amounts of indents, or require designs or proposed operations to be modified ; with the stipulation that the agent of a Company could, if dissatisfied, refer matters for the decision of the Government. The construction of railways under this system was greatly delayed. The officers of the railways complained of excessive control over and interference with their affairs. In London the Court of Directors controlled the decisions of the Company through the official Director. In India the control was exercised by the Government of India through their Consulting Engineers. In 1857-58 the House of Commons appointed a Committee to enquire into the causes of delay in the construction of railways in India. This Committee however came to the conclusion that though some cases had been cited in which the Government superintendence was productive of vexation and annoyance to the railway officials, "no very material delay in the construction of the various lines has resulted therefrom." ¹ They were further of opinion that though the machinery of supervision was cumbrous in order to protect the Indian revenue from undue expenditure, government control over the railway operations was requisite and even valuable to the interests of the shareholders themselves.

State control over
railways.

The guarantee system, under which the trunk lines of India were constructed came under review as soon as the capital accounts were closed and the Government were called upon to meet the guaranteed interest from their revenues. The guarantee being without limit on the total capital it led to a great extravagance of capital expenditure in construction. There was a direct inducement to the railway companies to spend as much money as possible on their works, instead of the exact reverse.¹ There was thus no limit to the sum that might be invested in railways and so no limit to the liabilities to which the extensions of such works under a system of guarantee might lead. Practically the Government was not very successful in keeping down expenditure and it led to the exercise of constant interference on the part of the Government with the railway companies' officers. In 1858 Lord Canning objected to the operation of the guarantee system and proposed as a remedy that a strict limit should be placed upon the capital to be guaranteed for any undertaking and also upon the time to be allowed for its completion.² Sir J. P. Grant, the then President of the Viceroy's Council, reviewing the railway policy of India strongly criticised the system. He expressed the view that the system was really the raising of money by a "special public works loan ; but under conditions the most disadvantageous possible for the people who must be taxed for the payment. If the public work on which the money is expended failed, the Government would have to bear the whole loss and the lender would be saved harmless ; but if it succeeded the Government had no profit, the lender had the whole."³ Mr. S. Laing opposed the Guarantee System on the ground that there was nothing to induce the engineers and agents

Danver's Report on the Administration of Indian Railways, 1858.

Minute of the Governor General, 20th November, 1858.

Minute by Sir J. P. Grant, 5th May, 1857.

of the companies to do their work economically and even the shareholders had the faintest possible interest in it for they had their 5 per cent. in any case.¹

The advantages of private enterprise were neutralised by two factors, *viz.*, that the management was non-resident and the data of cost and traffic were uncertain, but yet he thought this system was preferable to any other system. The Government, he thought, might be financially embarrassed and might not be able to raise funds, but in the case of companies capital could be had by means of calls and hence there would be continuity in policy and construction. For this continuity in construction and for a close connection between India and the English shareholders he was inclined to hold the view that the Government should make a little sacrifice.

The Government of India did not however endorse the views expressed in this Minute and were unwilling to incur any further liability under guarantee. They suggested a definite change in policy in that there should be an annual consolidated railway loan, as the means of finding money, and a railway department at the India office as a means of keeping all the Indian railways in one view dealing fairly by each, and supplying the wants of each which would make the retention of companies unnecessary.²

The question of the extension of the railways and the form of financial assistance became the subject-matter of considerable discussion in 1863-64 when the Indian Branch Railway Company submitted proposals for the construction of lines in Oudh and Rohilkhund. The Company proposed the construction of lines on the basis of a subsidy of £100 a year per mile open for 20 years together with free land, with an

Policy of subsidy.

¹ Minute by Mr. S. Laing, 1st April, 1861.

² Despatch from Government of India to the Secretary of State, 1861.

additional allowance for each large bridge. These terms have been described as the system of subsidy and they involved no interference on the part of the Government, except such as is usual in all countries in the interests, and for the safety of the public, while it made it incumbent on the projectors in their own interests to complete the works economically and rapidly.¹ Before a formal contract was executed, the Company found itself involved in financial difficulties and was unable to raise the requisite capital. Their shares being at a great discount they approached the Secretary of State for financial assistance. In their letter, dated the 31st November, 1865, the Directors pointed out that in the continued depressed state of the share market, there would be but little hope of a further issue of debentures meeting with public favour unless offered at a great sacrifice to the interests of the Company, and they would therefore look with confidence "to the liberality of the Secretary of State in Council in assisting them under their temporary difficulty." The Secretary of State insisted on the execution of the original contract and was prepared to advance £63,000 at 5 per cent. for the completion of the Cawnpore-Lucknow line. But the failure of the Consolidated Bank put the Company into financial difficulties again and further pecuniary assistance was refused by Lord De Grey. In March 1867, the Secretary of State reverted to a guarantee of 5% and a contract on this basis was drawn up with the Indian Branch Railway Company for the construction of railways in Oudh and Rohilkund. It is worthy of note that this contract was quite contrary to the view held by the Government in a previous letter that if the Company did not find themselves in a position to comply with the execution of the contract and to prosecute their undertaking with a fair prospect of

¹ Note on Indian Railways—E. C. Williams.

being able to raise the requisite funds, it would be far better that the Government should take over the concern, with its liabilities as it stood at the present market value of shares.¹ The terms of contract with the Indian Branch Railway Company were more liberal than those under previous contracts. Under these new terms the grant of land was in perpetuity instead of being only for ninety-nine years. The guarantee was absolute on all, instead of only on approved expenditure. The State could purchase the line at any decennial period after twenty years instead of twenty-five and fifty years. The Government of India

Guarantee System
opposed on financial
grounds.

took strong exception to these terms on financial grounds. Lord Lawrence pointed out that the extension of railways in India could not proceed without regard to the necessary limit to the sum that might be available annually from the Indian revenues for the purpose of paying guaranteed interest. He warned the Government that the re-opening of the system of guarantee would make many speculators advance schemes "under such patronage as they might secure" and unless preparation was made beforehand to meet such projectors, the Government might find itself involved in undertakings for which it might regret hereafter. He, therefore, proposed a comprehensive survey of the probable future requirements of the whole of India in respect of railways. Sir William Mansfield, the Commander-in-Chief of India, also pressed that the extension of railways in India should be limited by financial considerations. He held that some fixed sum should be appropriated by the Government of India from the annual revenues, within which the payment of guaranteed interest should be limited, an extension of the capital only being allowed as the increase of the net railway receipts reduced the actual charge on the Government for guaranteed interest. An enthusiast of

¹ Despatch from the Secretary of State for India, 21st December, 1865.

² Minute by Lord Lawrence, 16th August, 1867.

railway extension in the person of Mr. Taylor enunciated a novel financial dictum that "the interest charge should be taken out of capital or in other words be paid by borrowed money and funded." No one having ordinary financial prudence could concur in such an unusual view. The payment of interest on the capital of the shareholders during construction was in itself objectionable from a business point of view but it was more so when it provided for the increase of the capital of a line yielding no net revenue. When the Government of India were objecting to the extension of

railways in India on financial grounds,
Northcote's views. Sir Stafford Northcote, the then Secretary of State for India, enunciated the policy that the extension of railways in India was not simply a question of profits. "Lines which in themselves were perhaps unremunerative might be of the highest political, social and indirectly even of great commercial value."¹ These advantages he thought would justify "the principle that direct commercial success is not to be regarded as the one single test of their value." In any scheme of extension of railways in India some lines should be recommended chiefly by commercial and others chiefly by political utility.

He proposed that the commercial lines
Change of agency. should be constructed by companies under the guarantee system but for the political class direct Government agency would be preferable. He endorsed the view of Sir William Mansfield that it might be possible to ascertain a sum which should be taken as the limit of the annual charge which should be borne on Railway account, and thus to establish a system under which, in proportion as the revenues were relieved of the charge of old lines by their becoming self-supporting, new ones might be taken up in their place. For the first time we find the Home Govern-

¹ Despatch of the Secretary of State for India, 16th January, 1868.

ment inclined to a change in the policy of construction of railways in India by direct Government agency under certain conditions. With regard to the position of railways in India, Lord Dalhousie held that railways should be regarded as "national works" rather than private undertakings and this conception he thought would be a justification for the control which Government would exercise over railways, though not for actual construction. Sir J. P. Grant in 1857 advocated the policy of State construction of railways.¹ But it was the vigorous criticism of Lord Lawrence to the guarantee system that revolutionised the railway policy in India and laid down the foundation for the construction of railways by direct State agency.² He attributed the financial failure of Indian railways to mistakes or mismanagement in construction or to a line having been constructed in defiance of what prudence dictated. He was opposed to an indefinite scheme of railway extension without considering its effects upon Indian finances. The policy hitherto has been to depend upon the probable growth of Indian revenues to make good all necessary charges for interest. In the railway policy an attempt has been made to encourage private

¹ "I contend that, where Government is convinced that on the highest commercial, social, military and political considerations, a particular railway is greatly wanted by the country, and will be, if under the general control of Government, a directly remunerative work, it is not proper to leave it to any set of capitalists to say whether the country shall have that want supplied or not. My own opinion is that the construction of a railway extending beyond a man's estate ought in every country to be treated in principle as a national work, to be judged on national considerations." Minute, dated the 5th May, 1857.

² Lord Lawrence observed : "The liability of the Government to a permanent and probably increasing charge on revenue is much increased by the arrangement under which the Government can derive no profit whatever from the most successful railway, while it bears the entire loss of those which do not pay. There is no set off of profit against loss in the Government share of these transactions. The whole profit goes to the Companies and the whole loss to the Government. It therefore follows, almost as a positive certainty, that there will be a permanent charge on the Government for guaranteed interest so long as the present system continues." Minute, dated the 9th January, 1859.

enterprise. The shibboleth of private enterprise was a mere camouflage. It was an abuse of language to describe, as an interference with private enterprise, what was really a refusal to support "private speculators" and to guarantee them from all possible loss by the credit of the State or to allege that the investment of capital by private persons was hindered by the Government executing works when private persons refused to do so at their own risk. If the construction of lines was undertaken by the State there would be at least the same rate of interest on its loans, if not less, as in the case of guaranteed Companies together with the full advantage of any eventual surplus income. Further, in so far as the Government would have unfettered discretion in the construction, it would almost certainly lead to a reduction of charge in consequence of greater economy. As to management there was no ground to apprehend that management by Government would be less economical than under joint-stock companies having their boards in London. The suggestion of the Secretary of the State for India that the Government should take up all unprofitable lines and give all the profitable lines to private companies guarding the latter at the expense of the State against any possible loss, was undoubtedly quite unusual. The Secretary of State for India argued for this course that it was not desirable to depress the market of railway securities by the flotation of unprofitable companies as it would check the future progress. To this view Lord Lawrence replied: "In the interest of the Companies, the force of this argument is of course evident; and if the Government had any sufficient reason to improve the condition of the Companies at the expense of the revenues of India, there might be nothing further to say on the subject."¹ He laid down the programme that the requirements of India were for 15,000 miles

¹ Minute of Lawrence, 9th January, 1869.

and with an expenditure of £30 millions annually it might be possible to open 300 miles yearly and the requirements of India could be met in a period of about 30 years. He also emphasised the need for economy in the construction of railways in India. Hitherto the average cost of Indian railways was £17,000 per mile while the income of the very best line had barely risen to a figure sufficient to pay the guaranteed interest of 5 per cent. and that the average was about 3 per cent. "An extravagantly constructed line is permanently a financial failure. To a poor country like India this lesson is of exceptional interest."¹ This desire for economy led to an alteration in the gauge of the railways. Hitherto all railways were on the broad gauge system but the new railways were to be on metre gauge.

The policy laid down by Lord Lawrence with regard to the construction of railways in India by the State was followed by Lord Mayo who emphasised that though the Companies did useful pioneering work, conditions of the problem so changed as to justify "modified methods of action."² While supporting State construction of railways, he kept the door open for private enterprise provided the "financial responsibility of the Government was limited" and the protection of the public against the possible evils of an authorised monopoly was ensured. The Secretary of State for India approved of this policy with the remark that "the Government should secure for itself the full benefit of the credit which it lends."³

During the next decade railways were constructed in India by the direct agency of the State with capital raised chiefly in London. Among the lines constructed or begun by State agency between 1869 and 1880 were the Indus Valley, the Punjab Northern, Rajputana-Malwa, Northern Bengal, Rangoon and Irrawady Valley, and Tirhoot.

¹ *Ibid.*

² Despatch from the Government of India, 11th March, 1869.

³ Despatch from the Secretary of State for India, 16th July, 1869.

Under the terms of the guarantee system the Government could exercise the right of purchase of a railway after twenty-five years. The State could exercise this right in the case of the G. I. P. Railway in 1875 and in accordance with the accepted policy of State construction and management they ought to have taken over the concern themselves. A considerable amount of interest was due from the company on account of interest paid under the guarantee terms. To the utter surprise of the Government of India, the Secretary of State for India entered into negotiations with the Company without any reference to them, for the deferring of purchase. The right of the Government to the arrears of interest was foregone and a new contract was entered into for the division of surplus profits above 5 per cent. in equal proportion. The Government of India in their despatch, dated the 12th August, 1870, pointed out that the concession by the Companies with respect to surplus profits was in effect no concession at all ; while on the other hand the surrender of arrears of interest and of the right to acquire the lines after the first twenty-five years would mean a very serious loss to Government. They did not find any justification for this concession as the credit of the Government was never better, the undertakings of these Companies were nearing completion, and their stocks were at a considerable premium.¹ But this protest was too late to influence the decision of the Secretary of State and new contracts on the above lines were first granted to the G. I. P. Railway and later on to the Bombay-Baroda and the Madras Railways. "The result of these transactions," as Horace Bell says, "has anyhow been distinctly felt in the financial position

of the Empire and there can now be no difference of opinion in the matter. The loss to the State has, on the other hand, been a very material gain to the shareholders of the first two lines above mentioned.”¹

With regard to the East India Railway, a different policy was pursued. The Government of India exercised the option of purchase in 1879 and entered into a new contract with the Company for the management of the line. The purchase price of the line was payable in fixed annuities and the Company was allowed to leave £6,550,000 as its capital in the hands of the Government on which they would receive 4 per cent. interest. The Company was also allowed one-fifth of the surplus profits after payment of all charges including annuities. This contract laid down the basis of a new system in which the State and the Company worked on a co-partnership principle. This system, as will be seen later, raised important issues relating to the management of state-owned lines by Companies. From a financial point of view it is worthy of note that the Government of India paid annually Rs. 168,540 on an average during 1880 and 1891 as fifth share of net profits.

The policy of State construction of railways necessitated the borrowing of funds on Government account in the London Money Market.

Borrowing in the London market limited.

The continuous borrowing for railways and irrigation became a subject-matter of comment and criticism, with the result that the House of Commons appointed in 1878 a Committee to enquire into the question of East Indian loans. This Committee recorded its opinion that the expenditure upon railways and irrigation, though not remunerative in the aggregate, was on the whole beneficial to India and that although considerable sums had been wasted and certain profitable schemes undertaken, the policy

¹ Horace Bell—*Railway Policy in India*, p. 27.

of borrowing for productive public works might within certain limits be continued. They recommended that not more than £2½ millions should be borrowed in any one year. This limitation was thought to be justifiable because of the undesirability of adding to the sterling debt and the difficulties incidental to the maintenance of effective control over the expenditure of vast sums of money by a central public department.

But the question of railway construction in India at this time assumed an important phase. During 1874-78 India was visited by famines of unusual severity which resulted in the death of more than four millions of people and the cost of relief and the remission of revenue amounted to eleven crores of rupees. Protective measures against these calamities were urgently called for. On the one hand, there was the supreme need for making the production of foodstuffs less uncertain by constructing irrigation works and, on the other, there was the need for the improvement of the means of communication by which the surplus produce of one area could be rapidly and efficiently diverted to that in which famine was impending. The importance of railways as a preventive of famines was emphasised by the Famine Commission of 1878-80 in the following words :—

Famines and rail-
way construction.

“ Had it not been for the lines of railways which traversed the famine area in 1877, the results to the population would have been vastly aggravated, so that, in many cases, there might have been a complete failure of food for a time. The effect of the railways has been not only to reduce enormously the cost of inland transport but also to open up communications between distant provinces which were previously inaccessible to one another and thus to add very largely to the available resources of all districts in times of difficulty.”¹ The Commission recommended that 5,000

¹ Report of the Indian Famine Commission, 1878-80, p. 169.

miles of railway were immediately needed and the country could not be held to be safe from such calamities until the Indian railway system could show an aggregate of 20,000 miles. Many important schemes were projected but the financing of these schemes involved a very serious difficulty. The Afghan War led to the diversion of the resources of the State to the more urgent needs of defence. At the same time limitation was imposed upon the borrowing powers of the State for public works. It was evident that a change in the policy of railway construction was necessary if the pace of railway development was to be hastened. The Government of India diverted a portion of the Famine Insurance Fund which was created in 1878, to the construction of protective railways and irrigation works on the ground that it either reduced or avoided debt, thus enabling the Government to borrow for famine relief when need would arise. But this policy was later on disapproved. In 1881 the Secretary of State for India, Lord Hartington, communicated with the Government of India to revert to private agency for railway construction. He laid down that capitalists should be encouraged to construct railways without any guarantee "on the exclusive security of the success of the undertaking."¹ But if private capitalists were hesitating, some form of modified guarantee might be necessary. It was also laid down as a rule for future guidance that no new line was to be undertaken unless there was good prospect of its proving remunerative ; that is to say, unless it could be fairly calculated to pay within a maximum time of five years of being opened for traffic 4 per cent. on the capital invested.

It will thus appear that the policy of the Secretary of State for India was for the encouragement of productive railways but the Government of India viewed the problem

from the standpoint of famine protection. The views of the Government were expounded by Sir E. Baring in his budget speech in 1881. It was pointed out by him that a capital expenditure of £2½ millions a year was inadequate to meet the wants of India. He said, "The need for railway development is so important that I doubt whether Government agency alone can adequately perform this task, and I hold that in any case it is not desirable that it should do so if private agency can be found to undertake the work."¹ He appealed vigorously to private capitalists to undertake railway construction in India and emphasised that there was still scope for private enterprise and the Government did not want to create an artificial monopoly in its favour. The Government of India were prepared to aid private enterprise by making surveys and estimates and supplying all necessary information with a view to enable private individuals to judge for themselves whether they would invest their capital in any particular scheme. Sir E. Baring was not in favour of a guarantee but the Government of India pointed out that the limitations imposed upon expenditure on public works by the Committee of 1878-79 permitted an expenditure of not more than 50 lakhs of rupees on famine lines, and with this small sum there was no hope of accelerating the construction of what was urgently needed, without dangerous delay except by entrusting their railway works to private enterprise under a safe and reasonable guarantee.² They further proposed that the guaranteed interest on the capital of such railways should be a charge on the Famine Insurance Fund. The terms which the Government of India proposed were described as "limited guarantee." The Government should determine the direction of lines and if required make the necessary surveys. In addition to

¹ Financial Statement, 1881-82.

² Horace Bell—Railway Policy in India.

free land they proposed to pay interest on capital during construction and make up the net earnings of the line for a period of 5 years after the opening of the line to ensure an agreed interest.

This departure from the accepted policy of the Government brought private enterprise again into the field of railway construction. *Assisted Companies.* Under the system of modified guarantee the lines promoted were the Indian Midland, the Bengal Nagpur, the Southern Mahratta and the Assam Bengal. Without the assistance of the State were floated the Nilgiri, the Delhi-Ambala-Kalka, the Bengal Central and the Bengal North Western Railways. Of the unaided Companies, the first became bankrupt and the second and third had eventually to be given a guarantee. Under the terms of limited guarantee the Companies were practically agents of the Secretary of State for India for raising loans who gave a guarantee of interest on the sum so raised. "This system of railways is in fact state property, the Company being merely an agency for working it under stringent condition as to maintenance, supervision and power over rates and fares."¹ The Government gave a guarantee of 4 per cent. interest on the capital raised by the Companies and it was a charge upon net earnings. If there was any surplus it was to be applied to repayment of interest advanced by the Government and thereafter of the surplus, three-fourths were to be paid to the Secretary of State and one-fourth to the Company. The terms under which the Bengal Central Railway was constructed were however slightly different. The Company received a guarantee of 4 per cent. on paid-up capital during construction which advance was to be repaid with simple interest by the Company to the Government by a contribution of half its net earnings over 5 per

cent. The terms of purchase were, that at the end of 30 or 50 years, the Government would buy the undertaking at the rate of £125 for each £100 stock.* These railways in the absence of a better terminology have been described as "assisted" Companies. It is a misnomer to call these Companies as instances of private enterprise.

General Stratchey strongly disapproved of this reversion to guarantee system. He observed : "I say without any hesitation, that the system of giving an absolute guarantee on the capital has been productive of a very great waste of money. Not only has it been productive of waste of money, but it has also created a very valuable property at the expense of the taxpayers of India which has passed into the hands of third parties without their having incurred, in any sort of way, any risk. Theirs was not an enterprise. I say that, according to my judgment, this is an entirely unjustifiable application of the resources of India for the benefit of private persons."† In 1883 the Government proposed in a despatch that a public works policy in India must in a very great degree depend on the financial position. The continued fall in exchange necessitated a good deal of caution in the creation of fresh gold liabilities. They went so far as to say that they would regard increased taxation as a greater evil than relatively slow progress in railway construction, more specially in the case of railways not required for famine protection. As a general rule it was held that the Government should only undertake the construction of railways which from their unprofitable character in a commercial sense or other causes could not be made by private enterprise. In 1884 the Home Government appointed a Select Committee to re-examine the policy which should be pursued in regard to the extension of railways in India. In the meantime the various Chambers of Commerce pressed for a rapid extension

* Committee of 1884.

† Evidence before the Select Committee on Indian Railways, 1884, p. 2.

of railways in India. The trade of India was rapidly advancing and the existing railways were incapable of handling the increasing volume of traffic. The opening of coal fields and the growth of important industries of jute and cotton were making increasing calls upon the services of railways. In considering the means by which a more rapid extension of railway communication might be accomplished the Committee of 1884 recommended the continuance of both agencies, *viz.*, the State and private enterprise. It was true that the State could raise money more cheaply but "the construction by the State would compel the Government to assume an onerous charge."¹ But at the same time the "emulation between quasi-private enterprise and Government working would tend to promote economical construction." It is, however, to be observed that this cherished economy was meaningless, for construction by both agencies was under the direct supervision of the Government and the experience of the past years in regard to guaranteed railways was the reverse of economy. The Committee, further, recommended that the technical distinction between protective and productive works was not maintainable for they were based on estimates of cost and receipts which might later on prove to be wrong, and that "railways needed for protection from famine or for the development of the country be made as required whether they be technically considered protective or productive."² The distinction between protective and productive works was the source of another great evil. It was pointed out that this distinction hindered the application of borrowed capital to the very lines which were most needed as a protection against famine and tended to cause unreasonably sanguine estimates of many projected works

State and Private
enterprise recom-
mended.

¹ Report of the Select Committee on Indian Railways, p. 10.

² *Ibid*, 1884, p. 9

to bring them into the productive class.¹ The Committee further recommended that the limit of borrowing fixed by the Committee of 1878-79 at £2½ millions should be increased to £3½ millions but they disapproved of the suggestion of the Government of India that interest on the capital outlay of the railways should be paid from the Famine Grant. The construction of important

Branch and feeder
lines.

lines having been completed a need was felt for the opening of branch or feeder lines. The branch or feeder lines would be small concerns and the Government wanted to encourage the construction of these lines by private companies. At the same time the continued fall in exchange which embarrassed the financial position of the Government made them reluctant to increase their gold liabilities. In 1893 new terms were offered to prospective companies. Under these terms instead of a guarantee a subsidy was offered. This took the form of a rebate from the gross earnings of the main line from traffic interchanged with the Company's line so that the total profits of the Company should yield a dividend of 4 per cent. The rebate was however limited to 10 per cent. of the gross earnings from such traffic. But these terms did not prove attractive to the investors and in 1896 revised terms were offered. Under the new terms, a Company was permitted to construct approved branch lines and to pay interest out of capital and was allowed a rebate up to the full extent of the net earnings of the main line in supplement of its own earnings so as to permit a dividend of 3½ per cent. on its capital. A few lines were constructed on these terms but even these conditions did not meet with much favour with the investing public. "The reason for this," said Robertson, "is perhaps to be found in the fact that the only lines which the Government were prepared to allow Companies to

¹ *Ibid*, p. 11.

take up were those which were not expected to be the most remunerative and that they have undertaken the construction of the most promising projects themselves or have reserved them for construction as State Railways.' '1

We have briefly surveyed the financial arrangements under which the railway system in India has developed. This survey discloses that Indian railways have developed under a diversity of conditions the analogy to which is hardly to be found in any other countries. There are in India State lines worked by the State, State lines worked by Companies, Company lines worked by Companies and Company lines worked by the State. By the policy of purchase, the State has become the proprietor of the bulk of the guaranteed lines. Out of a total of 39,049 miles of railway the State is the proprietor of 27,863 miles. Thus the nationalisation of railways which in many western countries is looked on with favour is in India almost an accomplished fact. The following table indicates the growth of railways and the volume of traffic :—

	Mileage.	Passengers (millions).	Goods (million tons).
1858	22	...	...
1861	1,028	5·9	...
1870	4,182	17·1	8·4
1880	9,297	48	10·4
1890	16,404	114	22·6
1900	24,744	176·3	45·5
1910	32,099	371·5	65·6
1920-21	37,029	559·2	87·6
1926-27	39,049	604·8	85·8

It will appear from the above figures that in the course of half a century India possessed nearly 25,000 miles of railway. In the first quarter of the present century there has been an increase of 50 per cent. in mileage. The estimate of the Famine Commission that 20,000 miles of railway would meet the requirements of India has long been surpassed. The important towns of India have been connected and the railway policy of the present century is influenced by the considerations of trade and industries rather than military and famine protection which loomed large in the eighties. The phenomenal growth of the passenger traffic has falsified the apprehension of the early projectors that there would be very few passengers to avail themselves of the facilities of railway travel. Almost every decade shows the number of passengers either trebling or doubling. There has been similar growth in goods traffic. During 1880 and 1926-27 the amount of goods traffic has increased fourfold. This is the period which synchronises with a rapid development of the foreign trade of India. The radiation of the important trunk lines from ports has concentrated the bulk of the traffic on these lines. The advantages which the railway system of a country confers on it are too well known to need any mention. But it is beyond dispute that the economic prosperity of India has been largely conditioned by the development of railways. Famine in the sense of an absolute shortage of food has been a thing of the past. The mobility of labour has been the direct consequence of the improvement in the means of transportation. The increased value which the raiyat now gets for his products is due directly to an expansion of demand which has resulted from the cheapening of the means of transportation. These advantages are no doubt substantial but one may look back and ask at what cost these advantages have been secured. To the end of the last century there was an annual loss amounting

Financial results.

in the aggregate to £51½ millions. For the next ten years the State secured a small annual profit ranging roughly from £100,000 to £1¼ million. For the last few years the profits have been considerable averaging upwards of £4 millions per annum. The final result up to 1919-20 was a total profit of £44¾ millions against the loss of £51½ millions in the earlier period.¹ It must however be admitted that the net profit is really larger than the figure represents, for the payment of annuities from revenue which is in reality capital cannot be charged to revenues. But at the same time a considerable portion of the railway capital represents good will of the companies created at the expense of the Indian tax-payers. The figure of loss was also larger than it is made to represent. The fall in the exchange value of the rupee imposed greater liabilities on the State for the discharge of their gold obligations than are usually seen in the loss represented by gold. The percentage of profit earned by Indian railways will be seen from the following table :

Year.	Capital (Crores of Rs.)	Percentage of profit.
1900	329·4	4·99
1910	438·9	5·46
1920	558·32	4·74
19-6-27	788·66	5·41

In the present century three important questions relating to Indian railways have been of considerable interest—the allocation of funds for railway improvements and extensions, the management of railways whether by the State or by Companies and the rates policy. The supply of funds for capital expenditure by railways has always been a vexed question. On the one hand there was a growing demand

¹ Report of the Acworth Committee, 1920-21, p. 60.

for capital for new lines and on the other, capital was needed for the improvement of the existing lines to cope with the increasing volume traffic. The arrangement under which funds were provided for capital expenditure came to be known as the Programme System. This system as described by the Mackay Committee was as follows : “ Sometimes before the beginning of each financial year a statement is drawn up by the Government of India containing an estimate of the amount that can be made available for capital expenditure on railways during the year, and proposals as to the manner in which it shall be expended, whether for the improvement of existing systems, for progress on lines under construction or for the commencement of new lines. The estimate of resources includes all sums expected to be provided by the State from whatever source and all money expected to be raised by guaranteed companies. This scheme of expenditure when sanctioned by the Secretary of State with such modifications as he thinks necessary becomes the railway programme of the year.’ The system of allotment of funds under this system was not merely uneconomical but was the source of constant friction. No railway knew or was able to form any accurate estimate of the sum which would be allotted to it during a series of years. Further, as any unspent balance lapsed at the close of the year the work in many cases “ had to be hurriedly proceeded with and rushed through in such a manner as to interfere seriously with its satisfactory execution and the expenditure of the money to the best advantage.”² It often happened that grants were cut down during the year because the Finance Department had to meet increased demands from other departments or they might be

¹ Report of the Mackay Committee, pp. 5-6.

² Robertson—Report on the Administration and working of Indian Railways, p. 81.

increased unexpectedly at a late stage in the year because of some unforeseen windfall.¹

The Acworth Committee pointed out that the principle of lapse assumes that "a concern goes out of business on each 31st of March and recommences *de novo* on 1st of April." This system was not best adapted to the needs of a great commercial enterprise whose success in no small measure depended upon a continuity of policy. "We cannot but feel," observed the Acworth Committee, "that the authorities ultimately responsible for Indian railway finance have entirely failed to appreciate the position of the Indian railways as a commercial undertaking."² This observation is borne out by the facts that there was no depreciation fund from revenue, and the appropriation of railway revenues for general purposes. The absence of a depreciation fund hampered in no small measure the rehabilitation of fixed capital as the plant whose economic life was exhausted could not be replaced or written off. The exigencies of the Central Budget throttled revenue expenditure so much that the percentage of expenditure on programme revenue works to gross earnings fell from 6·1 per cent. in 1913-14 to 2·4 per cent. in 1918-19. The consequences of this underspending were that the net revenues of the State railways rose from 4·54 per cent. in 1914 to 7·07 per cent. in 1918-19, and maintenance was allowed to fall in arrears.

Even before the European war, the development of railways in India was not keeping pace with the demands of trade. But during the war the situation became extremely critical. The evidence before the Acworth Committee disclosed the urgent demand for the expansion of the capacity of the different lines to handle the growing traffic. The Indian coal indus-

Demand for develop-
ment.

¹ Acworth Committee's Report, p. 25.

² Report of the Acworth Committee, p. 27.

try was put to an unusual difficulty for shortage of wagons. Other industries were subjected to the same handicap. The Acworth Committee, therefore, expressed the opinion "That the railway development and the economic development of India have been starved is not the only charge which we are compelled to bring against the system of financial control to which the railways have been subjected."

The only way of escape from the situation that arose during war was the separation of the railway budget from the general budget.

The reasons for the separation of the railway budget from the general budget may be stated as follows :

(1) That it is impossible to provide for the proper development and efficient working of a continuous commercial concern by means of an annual budget system which implies that the concern goes out of business on the 31st March and starts again on the 1st April ; that even allowing for exemption from the principle of lapses at the close of each year, Railway Budgets, if incorporated in the general revenues, must in a large measure assume the periodical rigidity of the central budget and share in the vicissitudes of general revenues, whereas in a commercial undertaking like railways it is of the first importance that expansion and contraction of expenditure should follow, on a more elastic basis, the policy and financial circumstances of the railways themselves without undue limitation in regard to periods and dates.

(2) That, so long as the two Budgets are combined there is always the risk that railways will come to be subsidised out of general revenues.

(3) That, conversely, since a considerable portion of railway expenditure recurs in cycles, the whole of the excess of revenue over expenditure in years in which expenditure

is low, is diverted to meeting the cost of other heads of expenditure, and no reserve is kept to meet the heavy railway expenditure in years when expenditure is high.

(4) That the railways can only be expected to work to a definite net return over a period of years and that this involves the complete separation of the Budget.

(5) That from the point of view of the central budget, the inevitable fluctuations of railway revenue are a great disturbing factor and that separation is the only means of securing some measure of stability.¹

The problem of the separation of the railway budget from the general budget raised the important question of a contribution of revenue by the former to the latter. The Acworth Committee expressed the view that the only payment by the railways to the general exchequer should be the interest on the debt incurred by the State for railway purposes. But it is worthy of note that in earlier years, the railways were subsidised from general revenues and when they have been placed on a paying basis they should in all fairness afford some relief of taxation in the central budget. On this point the Committee said : " We have no wish to express a positive opinion, though we think there is much to be said for letting bygones be bygones." ² They further said that " the Railway department once it has met its liability to its creditors, should itself regulate the disposal of the balance and should be free to devote it to new capital purposes or to reserve or to dissipate it in the form either of a reduction of rates or improvement of services." This view of the Committee, it must be admitted, does not carry

¹ Memorandum on the separation of the Railway from the General Finance. See Report on Indian Railways, 1920-24, p. 85.

² Acworth Committee's Report, para. 74.

conviction. If railways are to be run on commercial lines there is no valid reason why they should not yield some profits to the relief of the central exchequer which takes the risk and ultimate financial responsibility. There is, however, another point that should not be lost sight of. The aggregate net gains in the nine years (1915-16 to 1923-24) amounted to 58·63 crores. But though this figure was considerably swelled on account of a curtailment of revenue expenditure, yet the annual average surplus would have been at least 4·16 crores making allowance for the necessary revenue expenditure. The central Government could not forego this revenue without serious dislocation of their finance, and consequently a convention was adopted fixing the liability of the railways for a definite contribution to the central exchequer.

It was proposed by the Government that the contribution should be a sum equal to five-sixths of 1 per cent. on the capital at charge of the railways (excluding capital contributed by Companies and Indian States and capital expenditure on strategic railways) at the end of the penultimate financial year plus one-fifth of any surplus profits remaining after payment of this fixed return, subject to the condition that if in any year railway revenues are insufficient to provide the percentage of five-sixths of one per cent. on the capital at charge, surplus profits in the next or subsequent years will not be deemed to have accrued for purposes of division until such deficiency has been made good. From the contributions so fixed will be deducted the loss in working, and the interest on capital expenditure on, strategic lines.

Any surplus profits that exist after payment of these charges shall be available for the railway administration to be utilised in

- (a) forming reserves for—
 - (i) equalising dividends, that is to say, for securing the payment of the percentage contribution to the general revenues in lean years,

- (ii) Depreciation,
- (iii) writing down and writing off capital ;
- (b) the improvement of services rendered to the public ;
- (c) the reduction of rates.

These proposals were however slightly modified by the Legislative Assembly in their resolution adopted on the 20th September, 1924. There was a general agreement that the railway finances should be separated from the general finances of the country and the general revenues should receive a definite annual contribution from railways, which should be the first charge on the net receipts of railways. With regard to contribution it was agreed that it should be based on the capital at charge and working results of commercial lines and should be a sum equal to 1 per cent. on the capital at charge of commercial lines at the end of the penultimate financial year plus one-fifth of any surplus profits remaining after the payment of the fixed return. Any surplus remaining after this payment to general revenues was to be transferred to a railway reserve ; provided that if the amount available for transfer to the railway reserve exceeds in any year three crores of rupees only two-thirds of the excess over three crores should be transferred to the railway to general revenues. The net contribution of the railways to general revenues under these arrangements was as follows :

1924-25	6.78 (crores)
1925-26	5.48 ..
1926-27	6.01 ..
1927-28	6.30 ..

The separation of the railway budget from the general budget did not contemplate an absolute financial independence of the railways. The Acworth Committee while

advocating financial independence assumed that the railway budget would continue to be voted by the Assembly so as to enable it to exercise an effective check over its activities. Government have instituted a standing Railway Finance Committee of the Assembly for the scrutiny and approval of all railway expenditure. The recommendations of this Committee are to be approved by the Assembly.

Two other questions which have been most widely discussed in recent years are the rates policy and the management of railways. The question of railway rates is a highly technical one. From the standpoint of the development of the industries of a country, its influence cannot be overestimated. The diversity of management, the existence of foreign interests, and the considerations for revenue have given rise to a complicated system which is injurious to the interests of industries. An analysis of the Indian railway traffic discloses that it has flowed in two streams—raw products moving towards the port for export and imported manufactured articles moving up country from the ports. It has been urged that the rates policy has encouraged this sort of traffic at the expense of the local or inter-provincial trade. The Indian Industrial Commission pointed out that “many inequalities have arisen between goods for export and imported articles on the one hand and goods for internal use or locally manufactured articles on the other, in areas where railways compete with one another or with water transport ; and speaking generally favourable rates for raw produce moving to the ports have resulted.”¹ The Indian Fiscal Commission also received a mass of evidence to the effect that the rates policy in India was designed to afford an “encouragement to the export of raw materials and to the import of foreign manufactures to the detriment of Indian industries, which often have to pay

¹ Report of the Indian Industrial Commission, p. 204.

what are often described as unfair rates both on their raw materials transported from other parts of India and on their manufactured articles despatched to the various markets,"¹ and they held that these complaints were not without foundation. The Acworth Committee also pointed out that "unquestionably low exceptional rates exist for traffic to and from ports, especially the great ports of Calcutta and Bombay."² The Indian Industrial Commission instanced the case of hides in which port rates were 50 p.c. lower than the internal rates and this affected prejudicially the Indian tanning industry. The competition between the different railway systems has also been responsible for the lowering of rates to ports with a view to divert traffic from one Indian port to another. An instance of this attitude lies in the 'block-rates' or higher mileage charges for short lengths imposed on traffic moving from a station near a junction with another system towards the junction, in order to travel a much longer distance over that other system. The system of block rates thus retarded the development of trade and commerce on natural lines and facilitated artificial diversion. Long-distance traffic is considerably hampered under another system known as the 'scale' or 'tapering' rates. Under this system each railway treats the length on its system as the sole basis for its charges, irrespective of the total lead, and a consignment which divides a journey of 300 miles equally between three railways only obtains the mileage rate applicable to a lead of 100 miles.

Indian industrialists have been insistent on a thorough reform of the rates policy with a view to develop the industries of the country. The case of Germany is put forward as an instance where a judicious rates policy has contributed in no small measure to the industrial development of the country. The vast extent of India, and the uneven distribu-

¹ Report of the Indian Fiscal Commission, p. 78.

² Report of the Acworth Committee, para. 150.

tion of her natural resources have made this problem still more important. As Sir Ibrahim Rahimtoolla said, "It appears to me that railways are one of the principal means by which substantial encouragement can be given to the growth of industries in the interior of the country." ¹ The Tariff Board in the course of their enquiry into several industries drew attention to the handicap imposed upon Indian industries on account of heavy freights on raw materials and coal.² Government of India, however, have not agreed with the Indian public on this subject. As the Hon'ble Mr. Clark said: "If you once decide that the railways are to be used as a means of promoting and encouraging industry, you will have abandoned the commercial basis and it seems to me that you must be prepared for possibly a severe loss in your revenue which will have to be made good in other ways." The same view is entertained by the Railway Board who observe in a letter "Concessions in rates which will not even in the long run prove remunerative, amount to a subsidy; that subventions in this form are open to obvious objections and that they are certain to affect very seriously the revenue from railways." ³ The Indian Industrial Commission laid down three principles that should guide the railway rates policy in India:

(1) The governing principle which, we think, should be followed in railway rating, so far as it affects industries, is that internal traffic should be rated as nearly as possible on an equality with traffic of the same class and over similar distances to and from the ports.

(2) That railways should accept the principle which is followed in some other parts of the world, that a consign-

¹ Proceedings of the Legislative Council of the Governor General, 1915, p. 579. See Resolution re State management of Railways.

² See Report on Paper and Cement Industries.

³ Letter No 188, 27th June, 1916.

ment travelling over more than one line should be charged a single sum based on the total distance.

(3) That favourable consideration should be given to new industries in cases where the investigations of the Department of Industries show this to be necessary, by the grant of low rates for a term of years. Though these principles were enunciated long ago very little has been done in this direction. The Acworth Committee recommended the establishment of a Rates Tribunal like the Rates Advisory Committee of Great Britain to deal with the cases of undue preference or unreasonable rates. In accordance with this recommendation a Rates Tribunal has been set up in India consisting of an experienced lawyer as Chairman and two lay members, and it is hoped that the whole system of railway rates will be placed on a much sounder foundation, and there will be little fear that the railway policy will adversely affect the industrial development of the country.

The question of management of Indian railways has not been free from controversy. In Great Britain and the United States, railways have been constructed by private companies without any financial or other advantage from the State, and the management of these railways has been left to the companies without considerable interference from the State, except what was required in the interests of the public to safeguard them against monopolistic disadvantage. The practice on the continent has however been different where State and private enterprise have participated in railway construction and management. It has been seen that India in this respect followed the continental system rather than the British or the American system. The Indian system, however, differs from the continental system in that these companies were floated in Great Britain. Further though the State is the proprietor of two-thirds of railway mileage in India nearly half the

Management of
Railways.

total mileage was entrusted to Companies for management. The system of Company management of State-owned railways originated as we have seen with the East India Railways in 1880. It was urged at that time that there were "distinct advantages in keeping in touch through the London Boards with British manufacturers, with British Consulting Engineers and with the London Stock Exchange as also in maintaining an agency in London for the recruitment of the European railway staff." It was also claimed that the technical and expert knowledge of the Directors would be helpful in the initiation of new schemes and in the improvement and the development of the railways under their control. But these arguments, however, lost considerable force with the acquisition of experience by the State Officers in the management of State railways. There is, however, a strong argument in favour of Company management in that it conducts its business "with more enterprise, economy and flexibility than are found by experience to be attained in businesses managed by the State."¹ But Companies managing the railways of India are not Companies in this sense because they are not the proprietors of railways but are merely managing agents. The question of company management of Indian railways was discussed in all its aspects by the Acworth Committee but they were divided on this subject. The chairman and four other members have condemned the Company system of management. They observed: "Our experience and investigations in India have led us to the quite definite conclusion that the system has never worked satisfactorily and cannot be made to do so. The management of the undertakings is nominally entrusted to the several guaranteed companies. We say 'nominally' for the Government feeling itself to be the real owner and ultimately responsible, not only financially but

¹ Report of the Acworth Committee, p. 65.

also morally and politically, for the policy pursued, has always refused to leave any initiative in their hands.”¹ The Companies have no real control over management as every case involving expenditure is subject to the sanction of the finance department. The conclusion of the Acworth group is that “the guaranteed companies do not possess the essential attributes which belong to a Company.” On the other hand, if the policy of a Company is unprogressive Government can do very little to introduce improvements. The Government of Bombay were distinctly in favour of State management of railways in India. They observed “That State control in a vast developing country like India is more suitable than Company control because the State will be inclined not to look so much at immediate profits for shareholders as to the satisfactory development of the various parts of this Continent.”²

The European Commercial Community in India are generally opposed to the State management of railways. Thus the Bengal Chamber of Commerce held, “The present system provides commercial and business-like administration and secures the tax-payer a growing source of revenue which the valuable Indian railway properties yield. It also possesses to a great extent that elasticity and freedom of working which are admitted to be associated with commercial undertakings.”³ This view is also maintained by the railway and commercial members of the Acworth Committee. They emphasised the dangers of democracy in the management of vast commercial undertakings. Nor did they think would it be possible for the government to supply the necessary funds that would be required for the expansion of railways in India. They also quoted statistics of working to show the superiority of Company-managed railways.

¹ Report of the Acworth Committee, p. 65.

² Letter of the Bombay Government, 6th April, 1917.

³ Letter from Bengal Chamber of Commerce, 18th October, 1916

Indian public opinion has insistently demanded state management of railways. Their arguments are based partly on economic and partly on political considerations. Though the railways have been built up in India with public subsidy, Indians have not been employed in higher appointments except to a very limited extent and have not been granted adequate facilities for technical training. It is also urged, that Company-managed railways are not amenable to public opinion and in the interests of the public they should be brought under the control of the legislature. Indians believe that Company management does not encourage the development of indigenous industries by sufficiently favourable treatment and that under the present system large profits are made in British interests.

The Acworth group of the Railway Committee having considered all the divergent opinions on the subject recommended that in India "the State should manage directly the railways which it already owns." As a consequence of this recommendation and the insistent demand of the public for State management of railways two important railway systems of India, *viz.*, the East Indian and Great Indian Peninsular were brought under State management in 1925.

The subject of road development in India has again come into prominence. This is due to the rapid development of motor transport in India. Before the war the potentiality of the new method of locomotion was realised, but after the war its progress was phenomenal. Thus in 1913-14, 4,419 motor vehicles of all kinds were imported into India and in 1927-28 the number rose to 25,950. The consumption of petrol in India increased from $4\frac{1}{2}$ million gallons in 1913-14 to 50 million gallons in 1927-28. This rapid increase is largely due to the remarkable development of motor passengers in the last few years. This development has taken

Growth of Motor
Transport.

place not only in towns but in rural areas also so that the services often run on comparatively long distances.

In commercial towns motor transport for goods has largely replaced bullock carts. In hill areas where railway construction has not been economical, motor transport for goods is developing. It is to be noted, however, that for long distances motor transport for goods cannot compete with railways. There is thus no ground for apprehension that the motor lorry will ever be a formidable competitor of railways so far as long distance is concerned. But with regard to passenger traffic the motor transport is partly competitive and partly complementary. In many localities the motor service is enlarging the area from which the railways draw their passengers, but on the other hand, in some cases, specially a short distance, circuitous journey by railways is being taken over by motor service.

The development of motor traffic is revolutionising the road problem in India. There is a demand for an extended range of movement and for a "coherent system which will unite broken and disconnected lengths into a continuous whole."¹ The Road Development Committee while recognising the importance of a network of railways held that "It is indeed somewhat incongruous there should be nearly 40,000 miles of railways in India, while the total mileage of surfaced roads is only 59,000"² The development of roads in India is essential for the economic, social and political advancement of the rural population. The Agricultural Commission pointed out that difficulty of communications left the cultivator entirely at the mercy of the local dealer and made primary marketing costly.³

¹ Report of the Road Development Committee, p. 16.

² Report of the Road Development Committee, I. 20.

³ Report of the Agricultural Commission, para. 298.

The development of the road system of India is thus desirable for the general welfare of the country but this development is handicapped on account of inadequate financial resources of local governments and local bodies. On the other hand, increased motor traffic largely increased the maintenance charges of roads whose surfaces deteriorated with great rapidity. The Road Development Committee

Increased Taxation
on motor spirit.

held the view that to meet the additional demands and requirements created by the growth of motor transport, some additional taxation should be imposed on motor transport for purposes of road development. They recommended the imposition of an additional duty of 2 as. per gallon on motor spirit, the proceeds of which should be set apart as a separate fund for road development. It was also suggested that of this Fund one-sixth should be retained by the Government of India as a reserve and out of the remaining five-sixths an apportionment should be made among the provinces in the ratio which the consumption of petrol in each province bore to the total consumption in India in each year. All projects for development are to be approved by the Governor General-in-Council with the advice of the Standing Committee of Roads of the Indian Legislature. These recommendations have now been put into effect.

CHAPTER X

FISCAL POLICY IN THE NINETEENTH CENTURY

The study of the industrial development of a country is bound to be incomplete without any reference to its fiscal policy. The efficacy of tariffs as a source of revenue and as a means of developing industries has been recognised by almost every country. But in India during the pre-British administration, tariffs were framed with the object of securing revenue only. The manipulation of the tariff with the object of developing local industries or with a view to secure concessions from the neighbouring states was unknown in India.

Under the system instituted by the Mogul Emperors customs duties were levied upon both the internal and external trade of India. In addition to the duties collected under the authority of the Mogul Emperors there were various other imposts levied by petty chieftains, Zeminders and Amils on trade passing through their respective territories. The right of collecting customs was an essential symbol of a territorial lord with the consequence that its incidence was almost universal. But the multiplicity of many sovereign or semi-sovereign states prevented the establishment of a uniform system of tariff and there was in consequence a bewildering variety of imposts and duties, legal and illegal, within the country.

Before the East India Company secured the territorial possession of India, its object was mainly the expansion of commerce and with that object in view it tried to secure commercial privileges from

Tariffs before
British rule.

Commercial privi-
leges of the Com-
pany.

the Indian rulers. Thus, as early as 1716, it obtained a firman from the Mogul Emperor exempting the Company's trade from any duty in consideration of a fixed payment of Rs. 10,000.¹ The Company did not participate in the inland trade of the country but many of their officers did carry on private trade in the interior. For this trade they claimed the privilege of exemption from duty. Nawab Mircashim remonstrated that the exemption of duty did not apply to the private trade of the Company's officers but it was of no avail. Vansitart attempted to make a treaty with the Nawab, the terms of which were as follows :—

(1) For all trade, import or export, by shipping, the Company's Dustak should be granted, and it should pass unmolested and free of the customs.

(2) For all trade from one place within the country to another, in commodities produced in the country, Company's Dustak should be granted.

(3) That duties should be paid on such commodities according to rates which shall be particularly settled and annexed to the agreement.²

But these terms were unacceptable to the Company's officers, and the Nawab in a fit of generosity abolished all internal customs but this cost him his throne.

In 1765 the East India Company got the Dewani of Bengal in consideration of an annual payment of 26 lakhs of rupees. The grant of Dewani meant the administration of the revenues of Bengal by the East India Company. It made the East India Company master of the provinces of Bengal, Bihar and Orissa. The Company had no experience in the administration of the revenue of the country with the consequence that they did not at first deem it safe to

The Company continued the indigenous system of tariffs.

¹ McGregor, *Commercial Tariffs*, p. 55.

² R. C. Datta, *India under Early British Rule*, p. 28.

make any radical alteration in the existing system, but simply attempted to systematise and regularise it. Thus we find from a resolution of the 23rd March, 1773, that "All duties, tolls or fees or ground rents collected at the Gunjes, shall be collected as usual until the Board shall establish such new regulations regarding them as they may think necessary."

The study of customs in India falls under three heads :

Land Customs in Bengal. Land customs or transit duties, Sea customs and town duties. Land customs deserve our attention first. In 1773 the

Government custom¹ was at the rate of $2\frac{1}{2}$ p. c. which was levied on all articles (with some exceptions) of inland or foreign trade which were imported into or exported from Bengal, Bihar and Orissa, whether by land or sea. The Company's goods were not, however, subject to this duty, and the privilege claimed by the Company's officers, of trading duty free was suspended in 1773. This duty was so onerous that in 1788, under instructions from the Court of Directors, Lord Cornwallis abolished it. Internal trade within the Company's possession was thus rendered free but the trade with the territories of the neighbouring princes was still subject to duties. Thus when Lord Cornwallis abolished the establishment of five customs houses in Bengal, Bihar and Orissa, he retained the import and export duties which were collected on the frontier of the Company's possessions and established a new customs house at Manju at the confluence of the rivers Ganges and Gogra for collecting duties on goods passing between the Company's provinces and the dominions of the Vizier of Oudh. It should be noted that this measure did not affect the collection of customs on the trade of Calcutta.

¹ This duty was different from the Company's custom or Calcutta town duty which was levied by the Company on account of their factorial rights on the import or export trade of Calcutta. Harrington, *Analysis of Bengal Regulations*.

Though the Company abolished the inland duty within their dominions, the trade was not as free as might be conceived. Under the name of Sayer, the Zeminders still collected duties on the trade passing through their territories. In 1793 when the permanent settlement of land revenue was introduced, the Zeminders were deprived of their right to collect Sayer. This step, be it noted, brought a considerable amount of freedom in the internal trade of Bengal, and the abolition of the Calcutta customs or town duty in 1795 made it whole free.

These salutary measures, however, did not continue long. The warlike administration of Wellesley gave rise to a pressing demand for revenue and these duties were revised at a higher rate in 1801, with a redeeming provision that articles which had once paid inland duty should not again be liable to it. The Company's territorial possessions in the meantime largely increased partly by conquest and partly by cession and the administration of customs became a matter of difficulty as different rates of duty prevailed in different provinces.

Regulation IX of 1810 which was passed on the recommendation of the Customs Committee of 1808, emphasised the importance of a uniform system and consolidated the different duties into one single duty on the whole trade of the country.¹

In order to make this regulation effective and productive of revenue customs houses and chowkees were established at the principal marts of Bengal and the Upper Provinces. Under the provisions of this regulation, a large number of articles including cotton yarn and piece goods, silk fabrics, embroidered cloths and brocades, betel nut, drugs and gums paid a transit duty of $7\frac{1}{2}$ p. c. *ad valorem*. Woollens, indigo and sugar paid 5 p. c. Further, the actual rate of transit duty varied according to the country of origin. Cotton and

¹ Report of the Committee on Customs and Post-office Regulations, 1886, p. 16.

silk piece goods if imported inland from the territories of the Vizier of Oudh paid a duty of $2\frac{1}{2}$ p. c. on account of treaty obligations. But on the same goods manufactured in the Company's territories, a duty of $7\frac{1}{2}$ p. c. was levied. No distinction was, however, made between the goods of the Company's territories and those of foreign settlements.

The territorial acquisition in the Presidency of Bombay took place at a later period than in Bengal.

The indigenous system of transit duties was continued unaltered in the first quarter of the nineteenth century. The transit duty was levied in each pergannah or subdivision of a Zilla in the shape of a toll on a vehicle of goods or produce passing through or imported for consumption therein or raised or manufactured therein and exported to other places.¹ The important feature of the system prevalent in Bombay was to make the trader pay the duties by degrees in small sums according to the distance to which they were carried. The most general rule in regard to the levy was that the payment of the dues in each pergannah exempted goods from further charge, but did not exempt them from payment in the next pergannah. The rates of duty though varied according to the different classes of goods were mostly specific.

Prior to 1803 the system of transit duties prevalent in the Madras Presidency was nearly the same as that in Bombay. The Regulations of 1803 abolished the existing anomalous duties and substituted a general duty of 6 p. c. calculated on a tariff valuation on goods imported by sea or land into the town of Madras or produced or manufactured within its limits. A general duty of 6 p. c. was levied on goods imported or exported across the frontiers of the Madras territories. A duty of 6 p. c. was also levied on goods imported into

¹ Report of the Customs and Post-office Regulations, 1886.

certain provincial towns or produced or manufactured within their limits. Goods belonging to the Company, cotton and cotton thread and several articles of minor importance were exempted from duty. "Goods might thus be subjected to three distinct 6 p. c. duties, viz., a frontier, a town and an export duty making an aggregate of 18 p. c." The Regulations of 1812 reduced the duty to 5 p. c. and provided that goods having paid the general inland duty could pass the frontier by land free of further demand into the territories of Indian chiefs; but goods exported to or imported from foreign settlements were subjected to a duty of 16 p. c. The obvious object of this measure was to divert trade from foreign settlements into British territories. It was also provided that goods having paid the 5 p. c. duty could pass into any part of the Madras territories except the town of Madras and the provinces of Canara and Malabar without being liable to any further demand.

It is manifest from the above description of the inland duty that the different provinces of India maintained separate customs arrangements and levied different rates of duties. These duties acted as an onerous burden upon the trade and industries of the country. Under the indigenous system the tax was light but the weight of the impost increased with the accumulation of new taxes in proportion to the distance traversed. One important consequence of the system was that trade was not seriously impeded as the difference in price in the long distance trade enabled the traffic to bear it. The plan of Regulation IX of 1810 was to levy one consolidated duty and this duty was fixed at a rate calculated by the average payments to which the long distance trade had been subjected previously. The consequence was now that short distance and long distance trade had to pay the same rate of

Effects of transit duties.

¹ Report of the Committee on Customs and Post-office Regulations, 1836, p. 16.

duty, and this arrangement placed the former at a disadvantage as contrasted with the latter. The trade of Bengal would have been annihilated if the duty had been collected in the way the law intended. But the fact was that the duty was collected on the traffic which passed over the rivers—the Ganges and the Jumna—the great high-ways commerce, leaving the bulk of the inland trade free from contributing anything to the revenues of the Company.

In Madras, on the other hand, the duty amounted to an excise consumption duty rather than a transit duty. With regard to this duty the Committee of 1836 observed: "These duties were more than the external commerce of the country could bear. The substitution of an *ad valorem* frontier duty for a toll fell particularly heavily upon cloth, which was at the time manufactured largely in the Madras territories, for foreign as well as home consumption. A great decrease consequently ensued in the foreign consumption; numbers of weavers were thrown out of employ, and many migrated to native states."¹ In order to realise the transit duty it was necessary to spread chowkees over the whole face of the country. "The number of chowkees and mettos or subordinate chowkees in each district varied from 30 to 231. The inquisitorial and vexatious character of the system will be evident from the following extract from the circular letter of the Collector of North Arcot: "The village ryots must report to the chowkidars the outturn of their crops of tobacco, turmeric, onions, garlic, ganja, blang which are liable to duty. The Monigars (heads of the village) and Curnum must prepare a return, showing the names of the proprietors, and the quantity in maunds of the articles produced. The ryots must report to the chowkidar when they are about to sell the articles to the traders. The chowkidar is then to deduct from the return the quantity

¹ Report on Customs and Post-office Regulations, 1836, p. 26.

sold. A statement is to be prepared showing the number of the houses of the weavers and handkerchief manufacturers and the number of looms of all sizes found in them. A separate seal is to be prepared which should be affixed to every kind of cloth as soon as it is woven a cubit long in each loom and a daily list should be kept of the pieces of cloth manufactured and a note for each piece so prepared should be given. At the time of the sale of the piece goods, the weavers should come to the chowkee, and report which cloth and to which of the Wurtuks he is going to sell them."¹

Imagination fails to picture a more harassing and inquisitorial system for the sake of revenue than the one given above. It is no wonder that under this crushing system the trade and industries of Madras should languish. That the system of transit duties was an instrument of oppression and extortion was corroborated by many a witness before the Commons Committee of 1832. The administrative provisions of the Regulation X of 1810 gave rise to an enormous amount of troubles. The law required that on payment of duty everybody should take out a rowanah or pass specifying the quantity and the value of the goods. The chowkee officers were endowed with the power of search and detention with a view to satisfy themselves of the identity of the goods covered by the rowanah. This power was doubtless a source of considerable vexation and loss to merchants but these were avoided by a compromise with the chowkee officers who attested the rowanahs in consideration of a bribe. In Madras the right to collect *sayer* was in many cases farmed and competition among the farmers often induced them to offer more than they could realise. The consequence was that they extorted from the merchants as much as they could, both legal and illegal, to fulfil their

¹ Report on Customs and Post-office Regulations, 1836, pp. 36-37.

engagements with the government. The Collector of Tanjore in his report observed : " That the commercial classes, especially petty traders are subject to endless vexation and exaction is undeniable, and under existing circumstances, it is quite impossible for a Collector to interpose any effectual check, because each instance is of so trivial a nature that the sufferer prefers a passive submission to incurring the trouble and expense of bringing forward a complaint."

In 1825 Holt Mackenzie in a memorandum pointed out that " These duties not only caused great vexation but imposed on trade a very heavy tax in the shape of delay and illegal exactions. Some articles had to run the gauntlet through ten customs houses before they reached their destination and few of the staple commodities of the country escaped subjection to repeated detention. The burden of the Government duty of 5 or $7\frac{1}{2}$ p.c. was itself a heavy one, but when to this was added the illegal demand of customs house officers, it became almost prohibitive to the merchant who did business on a small scale." The report of Charles Trevelyan aroused public attention in Great Britain to the inequity of a system which was allowed to continue to the detriment of industries. In 1835 Lord Ellenborough in a letter drew the attention of the Court to that report. He observed : " While the cotton manufactures of England are imported into India on payment of a duty of $2\frac{1}{2}$ p.c., the cotton manufactures of India are subjected to a duty on the raw material of 5 p.c., to a further duty on yarn of $7\frac{1}{2}$ p.c., to an additional duty upon the manufactured article of $2\frac{1}{2}$ p.c., and finally to another duty of $2\frac{1}{2}$ p.c., if the cloth should be dyed after the rowanah has been taken out for it as a white cloth. Thus altogether the cotton goods of India may pay $17\frac{1}{2}$ p.c. The raw hide pays 5 p.c. and when the leather is made into boots and shoes a further duty is imposed of 5 p.c. In what manner do we continue to treat our own sugar? On being imported into a town it pays 5 p.c. in-

customs and 5 p.c. in town duty and when manufactured it pays on exportation from the same town 5 p.c. more; in all 15 p.c.”¹ The effect of these and similar duties was virtually to prohibit the manufacture in towns of all articles not absolutely required for consumption; to confine manufactures to the place where the raw material was produced and by such restrictions the productive industry of the country was depressed. Lord Ellenborough consequently recommended immediate abolition of inland duties and pointed out that “It is in the improved condition of the country, and in that alone, that we can find the resources which will preserve us from bankruptcy.”

In the same year a Committee was appointed by Lord William Bentinck to enquire into the systems of customs and transit duties in the three presidencies. This Committee exposed the disadvantages of separate customs tariffs maintained by the three presidencies. They unhesitatingly condemned the operation of the transit duty. Before the Committee reported the hands of the Government were forced by the action of the Governor of Agra who abolished the transit duty in the Upper Province. In 1836 the transit duty was abolished in the Bengal Presidency and in 1838 Bombay followed suit in its repeal. In Madras financial considerations did not permit its repeal at once but the need for uniformity compelled it to abolish it in 1844.

Reference has already been made to the levy of town duties. These duties were in addition to the Government customs levied upon import or export. Not only was this duty in force in the principal sea-port towns of India but it was common even in the less important ones in the interior. The town duties were

¹ Letter from Lord Ellenborough to the Chairman and the Deputy Chairman of the East India Company, 18th March, 1835.

of the nature of a consumption duty. They did not necessarily interrupt the general course of trade but they were extremely partial in their incidence. With regard to town duties of the Presidency of Bengal the Committee of 1836 observed: "Trade and manufactures naturally desert places which are so heavily taxed, and hence a perpetual tendency to fluctuations is kept up. The trades of those places where town duties are levied are depressed and new marts of trade spring up in the neighbourhood. They bring the interference of the customs house officers home almost to the doors of the people. The inhabitants of these towns know of the transit duties merely by fame but they daily experience the inconvenience of the town duties."¹ The town duty in the towns of the presidency was levied at varying rates from 5 to 10 p.c. on salt, sugar of every description, tobacco, ghee, betel nut, turmeric, oil and oilseeds and pulse all of which were the staple articles of consumption and trade.

In the Presidency of Bombay, the places where town duties were regularly levied were Bombay, Surat and Broach and the cities and towns in the districts north of the river Myhee. The town duty of Bombay was 4 p.c. with higher duties in the case of goods from China and foreign settlements. This duty was imposed on almost every variety of goods imported into Bombay. Drawback was allowed in the case of certain articles warehoused for re-exportation but certificates from the other presidencies exempting from sea customs at Bombay did not entitle the importers to exemption from town duty. At Surat an *ad valorem* duty of 5 p.c. was levied on all articles coming by land. But in addition to this, the old Mogul consumption duties called 'Mookauts' were charged upon many articles of consumption which included cloth, chintzes and turbans, cotton and silk. There were other towns where the rates of duty were as high

¹ Report of the Committee on Customs and Post-office Regulations, 1836, p. 24.

as 10 or 12 p.c. before they came under British rule. These duties were, however, reduced to $2\frac{1}{2}$ p.c. and at the same time necessities of life were freed. In the Presidency of Madras the levy of town duties was almost universal. The rate of town duty was fixed at 6 p.c. by the Regulation of 1803. This duty was so mischievous in character that in 1806 the Government of Madras discontinued it everywhere except Madras. In 1808 the duty was however revived but was limited to goods imported into the towns, goods exported from or manufactured within their limits being left free. By Regulation III of 1812 piece goods imported by land into the town of Madras or manufactured within the limits of the inland customs chowkees were made liable to a duty of 8 p.c. on the market value of such goods. These duties did not make any substantial contribution to the revenue of the Presidency but, on the contrary, largely interfered with trade by "driving traders and manufacturers into the neighbouring villages" and by increasing the expense of marketing which ultimately fell on the consumer.¹ These duties were abolished by Act VI of 1844.

The abolition of transit and town duties is perhaps a landmark in the history of economic liberalism in India. It took more than half a century to realise the disadvantages that resulted from the restraint to which the inland commerce of India was subjected under various administrations. The existence of internal duties prevented the attainment of the economic unity which was an essential factor in the consolidation of the various provinces into one political unit. It was the consideration of revenue that stood in the way of their abolition for a long time and the system was tolerated even though it was a source of grinding oppression, harassment and corruption.

¹ Report of the Customs Committee, 1836, p. 26.

The subject of sea customs deserves our attention at this stage. It is significant to note that

Sea Customs.

as in the case of internal duties, there was no uniformity in the levy of customs duties on the sea-borne trade. The motive behind the administration of customs in the earlier part of the Company's rule was mainly revenue. But discrimination against foreigners also formed an important feature of the system. Thus, under Regulation 42 of 1793, it was provided that on imports by sea and land into the town of Calcutta a duty of 4 p.c. would be levied and that in the case of goods imported in foreign ships the town duty was enhanced by adding 60 p.c. to the prime cost and on China goods an addition of 30 p.c. was made to the invoice price. These arrangements, however, had the effect of diminishing public resources and imposing a double burden on the trade of Calcutta. In order to place all persons trading to and from the Company's dominions on the same footing as to duties it was thought expedient to abolish the Company's customs and impose Government customs only in Calcutta. Thus Regulation 39 of 1795 abolished the Calcutta town duty and imposed a duty of $2\frac{1}{2}$ p.c. on the imports by sea on the Calcutta price of the goods with similar exceptions in the case of China goods and goods imported on foreign bottoms. The export duty was fixed at the same rate as the import duty. In 1797 an additional duty of 1 p.c. was imposed upon imports and exports to defray the cost of an armed merchant marine, for the protection of the commerce of this part of the country against privateers. In 1800 in pursuance of an order of the Court of Directors the general rate of duty was raised to $3\frac{1}{2}$ p.c. and the additional duty of 1 p.c. was repealed.

Customs Committee
of 1800.

It will be seen from the above description that the administration of customs in the early part of the Company's rule was extremely complex. The burden imposed upon trade

was heavy and the incidence of tax was partial and unequal. In 1809 a Committee on customs laid down the principle that trade should be freed from the series of successive duties to which it was hitherto subjected, and merchandise having once paid duty should be permitted to pass throughout the territories of the presidency without being liable to any further duty. This principle became the foundation of the Regulation IX of 1810, which swept away the obnoxious features of discrimination and fixed the general rate of duty at $7\frac{1}{2}$ p.c. Articles exclusively imported by sea which had paid the import duties were allowed to pass inland without any further impost. Woollens, the principal article of import from Europe, paid 5 p.c. The goods for the Company's investments were not liable to any duty but they had to be covered by rowanahs. Cotton and silk piece goods which had paid the duty of $7\frac{1}{2}$ p.c. were allowed a drawback of 5 p.c. on exportation.

The provisions of this regulation were profoundly modified by Regulation III of 1811 which introduced the principle of discrimination in favour of British shipping. It is significant to note that up to 1848 the fiscal legislation of India was governed by this influence. The Regulation of 1811 was passed at the instance of the Court of Directors who pronounced against the advisability of admitting the foreigners to commercial benefits on the same terms as the subjects of the British Empire on the ground that the former did not incur any cost or risk in maintaining the Indian establishment. This was, however, a flimsy ground, the real motive behind it was the encouragement to the ship-building industry of Great Britain. Under this regulation, the duties levied on exports and imports carried in foreign ships were raised to double the rates chargeable on goods conveyed in British vessels. This enactment, with a view to exclude the foreign ships from participating in

Discrimination in
favour of British Ship-
ping.

the coastal trade of India, provided that "foreign vessels should be cleared out from a British Indian port direct to their own countries."¹ With regard to drawbacks where they were allowed, the foreigners were placed in a similar disadvantageous position. They were excluded from the benefits of the drawback of half the amount of the import duty. In the case of goods imported for re-exportation, a drawback of two thirds of the amount paid on importation if exported in British bottoms and one third if in foreign bottoms.

The principle of discrimination outlined above was also applied by Madras and Bombay. In Madras under Regulation IX of 1803 the general rate of duty on imports and exports was 6 p.c. which was raised to 8 p.c. on goods imported and exported in foreign vessels with the exception of American vessels. The Regulation IV of 1812 which followed the Bengal Regulation of the previous year doubled the rate leviable on imports and exports in foreign bottoms. The same regulation favoured the port of Madras at the expense of other ports. Thus it was provided that the rate of export duty on goods exported in foreign vessels was to be 8 p.c. which was raised to 16 p.c. in the case of subordinate ports.

The physical configuration of the Bombay Presidency with its long sea board and the multiplicity of ports under Indian chieftains and in foreign settlements rendered the administration of sea customs a matter of considerable difficulty. The island of Bombay, however, on account of its central situation and fine harbour became the centre of great entrepot trade. It is significant to note that from the very beginning, Bombay had a low scale of duties and this combined with the simplicity with which the tariff was administered materially strengthened the position of this

¹ Report of the Customs Committee of 1886, p. 54.

port. All export duties having been withdrawn since 1799 duties were collected mainly on imports. The rate of duty was $2\frac{1}{2}$ p.c. *ad valorem* but in the case of foreigners and vessels from certain foreign countries discrimination was resorted to by raising the value of the dutiable articles. This policy of discrimination was carried further under the Regulation of 1813 which raised the duty in the case of foreign bottoms to $7\frac{1}{2}$ p.c.

The Bengal Regulation IV of 1815 was passed with a view to promote the trade of Great Britain with India. This regulation provided that woolens of all sorts, metals of all sorts and canvas, cordage and marine stores if of British origin should be exempted from duty on importation, provided they were imported in British registered or Indian built ships. The import duty on other articles of Great Britain was reduced to $2\frac{1}{2}$ p.c. It was further provided that articles of continental Europe imported in British registered or Indian built ships were to pay at the rate of 5 p.c. The exports of raw materials and indigo to the United Kingdom were allowed a drawback to the full amount of the duty but the exports of manufactured goods remained saddled with the transit and export duties. With regard to the effect of this regulation upon Indian industries the Committee of 1836 observed: "It is unquestionable that these measures had the effect of placing the manufactures of India heavily taxed by the inland system at a disadvantageous position in their competition with the free or lightly taxed articles of Great Britain produced by the most improved machinery." It was also found by the Committee that "the alterations disturbed materially the uniformity of the system, and that they caused taxation to operate with a very unequal pressure, at the same time they dried up some considerable sources of revenue." In the alterations provided in the Regulation of 1817 "the same anxiety to promote British interests"

Preferential treatment of British manufacturers.

which characterised the provisions of Regulation IV of 1815 is observable; but both in that regulation and in this the effect of such changes on the interests of India seems to have been overlooked or at least very partially adverted to. Relief was given to Indian piece goods by lowering the transit duty from $7\frac{1}{2}$ to $2\frac{1}{2}$ p.c. but it came too late, the Indian cotton manufactures having already been destroyed. The Bengal Regulation of 1815 was followed by similar legislation in the two other presidencies.

The abolition of transit duties in Bengal and Bombay led the Government of India to compensate the loss of revenue by alterations in the sea customs duty. The need for uniformity in the levy of customs duties by different provinces was also felt. The Committee of 1836 pointed out that "Laws regulating the rates of duty on sea borne trade, affect so many and such distant interests, and the parties concerned are often so ill informed regarding them, that uniformity of rule appears to be particularly desirable. The inconveniences arising from want of uniformity in the rates of duty at the different ports of British India have for many years past been a constant subject of complaint." The Government of India, in a letter to the Court of Directors, accepted this view. They observed: "We are agreed in opinion that the assimilation of the system of duties throughout India would be attended with the most important benefits to the commerce and productive powers of the entire British Territory."¹

The Act of 1836 was the result of the adoption of this policy by the Government. Under the provisions of this Act, the import duty was raised to $3\frac{1}{2}$ p.c. and British goods which had hitherto been admitted free of duty were made liable to duties with a view to make good the deficiency consequent on the abolition of internal duties.

¹ Letter from the Government of India to the Court of Directors, 19th October, 1836.

The export duties were simplified and the number of enumerated articles was reduced from 234 to 15. It should however be observed that the principal articles of India's exports remained liable to varying rates of duty with the object of securing either revenue or favour British industries.

Discrimination regarding country of origin and the nationality of ships still formed an important feature of the Act. Thus the rate of duty levied on foreign manufactures was fixed at double the rate at which British goods were admitted. Again British goods imported in foreign ships paid double the duty which was quadrupled in the case of foreign goods imported in foreign bottoms. With regard to exports it was provided that cotton could be exported to Great Britain, America or any British possession in America free of duty on British bottoms but was subject to a duty of 8 as. per maund if exported to any other country and the rate was doubled when the export took place on foreign bottoms. Again sugar exported to the United Kingdom or any British possession became free but if exported to any other place was made liable to a duty of 3 p. c.

It is beyond question that these measures impeded the growth of direct trade between India and the continent of Europe and favoured the development of London as the centre of a great entrepot trade. It is also worthy of note that the continuance of export duty on Indian manufactures at a period when competition with machine products developed in an acute form hastened in no small measure the decay of such industries.

The Act of 1836 is an important Act in the history of fiscal legislation, as it represented the beginning of a policy to have a uniform rate of customs duties for the whole of India. The constitutional powers vested in the Governor-General in Council for passing laws for different provinces hastened the attainment of this uniformity. Thus two years

after the Act of 1836 an Act was passed which assimilated the Bengal tariff into that of Bombay. In 1844 the inland duties of Madras were repealed and the Bengal tariff was made applicable to it. Thus for the first time since the commencement of British rule, India possessed a uniform tariff.

The loss of revenue consequent on the repeal of the transit duties in Madras necessitated tariff revision in 1845. The general import duty was raised from four to five per cent. on British manufactures, but the discrimination against foreign shipping and foreign manufactures continued. In a Despatch, dated the 22nd April, 1846, No. 3, the principles on which the customs duties of India ought to be regulated were discussed. It is significant to note that this was the period when Sir Robert Peel introduced his fiscal reforms and Great Britain accepted the principle of free trade to guide her future fiscal policy. From this period the fiscal legislation of India began to be influenced by the principle of free trade which was the declared policy of Great Britain irrespective of any considerations in regard to differences in economic conditions which the two countries presented.

The Despatch of 1846 laid down three important principles which would guide the fiscal policy of India. These principles were—

Influence of the doctrine of free trade.

(1) The abolition of duties on the exportation of staple commodities of India with the exception of indigo ;

(2) The abolition of the duties on trade between the several Presidencies of India, commonly called the "port to port" trade ;

(3) The abolition of the double duties on merchandise exported or imported on foreign bottoms.

This despatch was laid before the House of Commons, in 1848 and an implied pledge was held out to the mercantile community and the public at large that the views contained in it, should, as opportunity offered, be carried

out in practice. As a sequel to this despatch it was enacted in 1848 that "no duty shall be charged on any goods lawfully carried from any port in the territories subject to the Government of the East India Company to another port in the said territories." It was also provided that discriminating duties on foreign ships were to be abolished and that all goods exported from or imported into any port in British India should be charged with the same rates of duty as if such goods were exported or imported on British bottoms. This measure, be it noted, was the result of a policy of gradual relaxation of Navigation Acts of Great Britain which were, however, swept away in 1849. In 1850 the coasting trade was thrown open to the ships of all nations and the last relic of the navigation laws disappeared from the statute book. The differential duties on the goods of foreign countries were, however, continued till the end of the Company's administration. This survey of the fiscal policy adopted by the East India Company discloses that for the greater part of their rule, the industrial and commercial interests of India were subordinated to those of Great Britain. The inland trade was crippled by the heavy internal duties, as also by the competition of the machine-made products of Great Britain admitted into the country either at a low rate of duty or duty free. The foreign trade in manufactures was crippled by the export duty as also by the heavy protective duties of Great Britain. The export of raw materials was, however, encouraged for the growing industries of Great Britain.

The transference of the administration of India from the East India Company to the British Crown after the Sepoy Mutiny, opened a new chapter in the fiscal policy of India. The financial needs, the interests of the British manufacturers, specially those of Lancashire, as also the general acceptance of the principle of free trade influenced the fiscal policy of India in a greater

Fiscal policy under
the Crown, 1850-1882.

degree than before. The history of fiscal legislation during this period centred mainly round the import duties on cotton goods and general export duties. The scope and significance of the doctrine of free trade in its practical application was discussed with vigour and enthusiasm. The growth of the cotton mill industry in India became a source of alarm to the Lancashire manufacturers who were enjoying a monopoly of the Indian market with the result that the fiscal policy of this period was concerned with cotton duties, all other articles being relegated to the background.

The Sepoy Mutiny caused a great embarrassment to the finances of India. Lord Stanley in a despatch emphasised that "every effort must be made to bring up our revenue to the level of our requirements, even if it should be necessary for that purpose to permit the temporary abandonment or suspension of the application of principles which have on former occasions received the approval of the home authorities."¹ The land revenue, which constituted about two-thirds of the actual income of the State was not susceptible to immediate increase. The only alternative left to the Government was the revision of the customs duties. The question of the revision of the customs duties attracted the attention of the Governor-General even before the finances were disorganised by the Mutiny. In 1857 the Governor-General proposed the equalisation of duties on British and foreign manufactures, the assimilation of the duties on manufactured and unmanufactured goods, the abolition of export duties and the increase of import duties. The Secretary of State for India approved of the proposal for the equalisation of duties on British and foreign manufacturers and in view of pressing financial needs insisted that "The measure should be carried into effect, not by reducing the duty on goods of foreign origin to

¹ Revenue Despatch to India, No. 4, dated 7th April, 1859.

the rate now levied on British goods of same description ; but as a general rule, by raising the rate now leviable on British goods to that paid on similar foreign articles." As regards the assimilation of the duties on manufactured and unmanufactured goods he recognised the validity of maintaining a difference in the rates of duty. It was undesirable that "fiscal arrangements should throw impediments in the way of native industry" depending upon foreign countries for the supply of the materials required by them. It is this consideration which induced the Company to reduce the duty on cotton yarn to $3\frac{1}{2}$ p. c. while levying 5 p.c. on woven goods. With regard to export duties the Secretary of State thought that they were so low and India had so great an advantage over other countries in the production of materials subject to export duties, that they might be increased without checking exportation. He would not, however, consent to the imposition of a duty on raw cotton "considering not only the difficulty with which Indian cotton has to contend in competing in the English market with that produced in the United States, but also the paramount importance of obtaining the widest and most unrestricted field for its supply to England." With regard to import duties it was held that "it cannot be disputed that the rates of import duty levied in India are on the whole extremely moderate" and that there was room for their increase without substantial reduction of consumption.¹ The Secretary of State gave his approval to a scheme raising the rate of duty on unmanufactured goods to $7\frac{1}{2}$ p., c. on manufactured goods to 10 p. c. and on such articles as are used as luxuries by the richer classes to 10 p. c.

Before this despatch reached the Governor-General, the Act VII of 1859 was passed. The provisions of this Act were in substantial agreement with the views of the Secre-

¹ Minute of Mr. J. P. Grant, 26th January, 1857.

tary of State with the exception of the duty on cotton yarn on which the Act imposed a duty of 5 p.c. and the duty on luxuries was fixed at 20 p.c., and coal, cotton, wool, and machinery for the improvement of the communications and for development of the resources of the country were imported duty free. The export duty on grain was raised from half anna to two annas per maund.

The increase in the rates of duty on British cotton piece goods and yarn dissatisfied the European mercantile community. They in a memorial to the Secretary of State for India urged "the extreme impolicy of placing further imposts upon the trade in British manufactures." They complained that "At present with the addition of extra 5 p.c. duty, cotton piece goods cannot be sold at a profit. That a large proportion of the piece goods imported into India has been manufactured out of Indian-grown cotton and that competition in this great field of industry has commenced in India, as factories for the manufacture, both of goods and yarns have been constructed and are in course of construction. The manufacture of yarns under the spot is progressing fast and English spun yarns, subject to an import duty of 5 p.c. will be unable to compete with them." ¹

The tariff of 1859 did not, however, yield the result expected of it as the high rates of duty were accompanied by reduced consumption.

Increase of cotton duties.

The financial position of India was summed up by Mr. Wilson, the Finance Member, in the following words: "We have a deficit in the last three years of Rs. 30,54,64,880—we have a prospective deficit in the next year of Rs. 6,50,00,000—we have already added to our debt Rs. 38,41,075,50." In order to increase revenue by increasing consumption it was considered essential that the

20 p.c. duty should be lowered to 10 p.c. At the same time the duty on cotton yarn was raised to 10 p.c. which was the rate levied on cotton piece goods. Mr. Wilson attempted to justify this measure in the words: "We can discover no good reason why cotton yarn and twist should be imported at a lower rate of duty than cotton piece goods. I know it is said that it is an earlier stage of manufacture; but may the same not be said of grey cloth as compared with bleached and dyed cloth and printed cloth. I can find those who complain that their labour in spinning yarn by hand is interfered with by a lower duty on yarn."¹ In 1861 the duty on cotton yarn was reduced to 5 p.c. and in 1862 it was further reduced to 3½ p.c. and the duty on cotton piece goods was reduced from 10

Reduction of cotton duties.

p.c. to 5 p.c. Mr. Samuel Laing recognised the strong feeling among the mer-

cantile community against the cotton duties and was compelled to grant the concession demanded. He observed: "I cannot deny that England having founded the Indian Empire may with some reason ask India so to levy the necessary revenue as not to interfere injuriously with trade between the two countries. A heavy import duty on trade between England and India comes very near in principle to a transit duty between different parts of the same Empire."² At the same time he argued that India might levy a moderate duty on imports without violating the principle of free trade. "Free trade does not mean that there shall be no taxes, but that taxes shall be levied solely with a view to revenue, and not partly for revenue and partly for protection. That every customs duty on an imported article should have a corresponding excise duty on similar article produced at home has therefore become an axiom; and it only admits of

¹ Financial Statement, 1862-63.

² Speech of Mr. Laing in the Legislative Council on the 16th April, 1862.

one exception—where the amount of import duty is so moderate that it does not seriously affect trade, while it makes it obviously inexpedient to establish an excise machinery for the sake of levying a trifling duty. This is the case with regard to corn in England, where a duty of one shilling a quarter, equal to 5 p.c. on the cheaper sorts of foreign grain is retained and it is precisely our case with regard to piece goods. We cannot dispense with customs duties on our imports generally, and while this is the case no reasonable man can object to our retaining an old accustomed duty of 5 p. c. on manufactured goods." ' It will be manifest from this statement that Mr. Laing declared authoritatively that a five per cent. duty on cotton goods was not protective and that no excise duty was required to countervail the import duty.

In 1874 the Manchester Chamber of Commerce addressed a memorial to the Secretary of State complaining—That the duties of $3\frac{1}{2}$ p.c. on yarns and 5 p.c. on cotton manufactures imported into India were assessed on tariff rates fixed many years ago, when values ruled much higher than at present; so that the duties thus levied amounted to 4 p.c. on the actual price of yarn in India and nearly 6 p.c. on cloth ;

That the tax was found to be absolutely prohibitory to the trade in yarn and cloth of the coarse and low priced sorts ;

That the Chamber were informed that it was proposed to import Egyptian and American raw cotton into India to manufacture finer yarns and cloth which would thus compete with goods received from England on which the duty was levied ;

That a protected trade in cotton manufacture was thus springing up in British India to the disadvantage both of India and Great Britain ; and

That the duties increased the cost to the native population or at least to the poorest of the people, of their articles of clothing and thereby interfered with their health, comfort and general wellbeing.

When it was pointed out that the tariff valuations were revised in 1867 and in 1871, the Manchester Chamber represented that they had only incidentally referred to valuations and that their main object and prayer was the total and the immediate repeal of the duties themselves as "under the protection extended by the levying of duties on imports, to the spinning and weaving of cotton yarn and goods in India, a large number of new mills are now being projected, and the revenue from import duties will be consequently diminished. The impost is therefore defeating its own object, as well as inflicting an injustice on the consumer and importer."¹

In the same year the Committee of the Bengal Chamber of Commerce pressed for a revision of the tariff valuation and the Government of India appointed a Committee to whom the representations of Manchester were referred for opinion. This Committee observed in their report: "In so far as the complaints alleged that the tariff valuations were excessive they have been found to be just."² As regards the other point whether the duty is absolutely prohibitory to the trade in yarn and cloths of the coarse and low-priced sorts, the Committee observed: "It must of course be admitted that the Indian mills have injured the English ones to the extent to which their manufactures have displaced the manufactures of Manchester. But the duty, though contributing to this result cannot be said to be the sole cause of it; since India, with many disadvantages possesses certain natural capabilities for producing goods of this low quality, which will

¹ Resolution of the Government of India, Financial Department, 12th August, 1875.

² Report of the Customs Committee of 1875.

probably secure the trade in them to her, even if the duty be removed." The Committee found that the class of goods that meet Indian competition paid 4 lakhs in duty whereas the total revenue from cotton duties amounted to 81 lakhs. They concluded with the remark, "The demand that, because one class of goods represented by four lakhs of duty in all India, has, in one part of India, to meet a local competition, the Government shall remit the remaining 77 lakhs which competition cannot affect, appears to the Committee quite unreasonable."¹ The statistics of trade in cotton goods did not disclose that any prejudicial effect was produced on it by the import duty of 5 p.c.

1859-60	to	1861-62	annual average	£ 11,000,000
1862-63	to	1865-66	„	£ 12,150,000
1867-68	to	1870-71	„	£ 17,966,000
1871-72	to	1874-75	„	£ 17,970,000 ²

The Committee further thought that relief was needed more urgently in the case of other articles than cotton goods. In

1875 was passed a Tariff Act which lowered
^{The Tariff Act of 1875.} the general rate of import duty from

7½ p.c. to 5 p.c. but did not alter the duties on cotton goods. Mr. Hope in introducing the bill observed that only a small proportion of the cotton trade was affected. There was scarcely a trade furnishing imports to India which had not to suffer to some extent from competition with local manufacture. The Government, however, apprehended that if India produced finer yarns and cloth from imported raw cotton, their revenue from cotton duties would diminish gradually. With a view to guard against such a contingency, he proposed the imposition of an import.

¹ *Ibid.*

² Tariffs valuations were lowered in 1869 by 15 p.c.

duty of 2 p.c. on long stapled cotton imported from Egypt or America. "If in spite of such precautions," said Mr. Hope, "the Indian mill manufactures should assume more important dimensions than at present, then there appeared no doubt that the proper course would be, not a repeal of the import duty with its concomitant resort to more objectionable taxation, but the imposition of an excise duty."¹ The imposition of a duty on a raw material is not approved even by a highly protective country not to speak of a free trading country. But Mr. Hope wanted to equalise competition by his dictum that "In order that a local manufacture using imported raw material might have no advantage over the importer of a manufactured article who had to pay a duty, a duty on the raw material was required in amount equal to that paid on such manufactured article."² The principle of a compensating duty is that where a raw material is taxed the manufactured commodity is subjected to a higher rate of duty so as to compensate the local manufacturers using the taxed material. But here a novel view of compensating duty was put forward.

Sir William Muir pointed out "our position would not have admitted abandonment of the duty on cotton imports. The loss of £ 800,000 could not have been undergone unless we could have substituted for it some new source of taxation." "It must not be forgotten," he said, "that the Government has specially favoured this branch of merchandise by adopting the lower valuation of the minority of the Committee."

Marquis Salisbury, the then Secretary of State for India, however, did not approve of the provisions of the Act of 1875 relating to cotton duties. In his despatch, dated the 15th July, 1875, he referred to the abolition of cotton duties on political

Retention of cotton
duties disapproved by
the Secretary of State.

¹ Proceedings of the Council of the Governor-General of India, 1875.

² Proceedings of the Council of the Governor-General of India, 1875.

grounds, provided the financial condition permitted it. Subsequently he pressed for the abolition of this duty on economic grounds as well. "On general principle," he observed, "it is liable to objection, as impeding the importation of an article of first necessity and as tending to operate as a protective duty in favour of a native manufacture. It is thus inconsistent with the policy which Parliament after very mature deliberation has sanctioned."¹ Nor did he accord his sanction to the duty on raw cotton on the ground that it would retard and perhaps prevent the growth of an important branch of Indian industry. The Tariff Act of 1875 raised also a constitutional issue of far-reaching importance. The provisions of the bill were not communicated to the Secretary of State before they were passed into law by the Legislative Council on the ground of urgency and secrecy. The Secretary of State, however, did not approve of this procedure even though it was pointed out by Lord Northbrook that there were many precedents of the procedure which he had adopted. Besides, the financial situation was by no means hopeful. In India, the revenue was subject to serious fluctuations, and with the probability of a permanent depreciation in the value of silver, with all the serious consequences that were expected to ensue, it was impossible to give up so large an amount of revenue within a fixed term of years consistently with the safety of the finances.² The controversy led to the resignation of Lord Northbrook and the appointment of Earl of Lytton as Governor-General of India, and Marquis of Salisbury immediately began to press for the abolition of cotton duties. In February, 1876, a deputation of employers and workmen representing the cotton manufacturing districts of England made the following state-

Deputation from
Lancashire.

¹ Despatch of the Secretary of State of India, 11th November, 1875.

² Letter from the Government of India, 25th February, 1876.

ment to the Secretary of State :—

That in July, 1874, Rs. 22,000,000 were invested in the cotton factory industry of Bombay, and that in November, the amount of those investments had increased to Rs. 38,000,000.

That in 1870 there were only 14 mills in the Bombay Presidency, in 1874 there were 26, and in 1875 no less than 38.

That the exports of machinery to India for the purposes of cotton manufacture have very largely increased during the same period.

That some of the mills have been fitted with machinery for spinning the bulk of the medium goods, as well as the whole of the coarse goods consumed in India.

That there is nothing to prevent the gradual substitution of Indian for British manufactures in a trade which constitutes nearly two-thirds of the total exports from England to India. The Bombay Chamber of Commerce supplied the Secretary of State with figures showing a marked decrease in the import of certain classes of piece goods and yarns and the Secretary of State was convinced of the view that "It is difficult in the face of these indications to doubt that the protective action of the present tariff has had a marked effect in contracting within its present limits a trade, which if it had not been impeded by this obstacle, would have expanded to much larger dimensions."¹ He recognised the disadvantages to which Indian mills were subjected as regards fuel, cost of construction and organisation but these he thought were more than counterbalanced, quite irrespective of the import duty, by the natural advantages which India possesses in the command of raw material, proximity to the consuming market and in cheap and appropriate labour. The con-

1 Despatch of the Secretary of State for India, 31st May, 1876

clusion at which he arrived was that "Whether the question be regarded as it affects the consumer, the producer or the revenue, I am of opinion that the interests of India imperatively require the timely removal of a tax, which is at once wrong in principle, injurious in its practical effect and self-destructive in its operation." ¹

In 1876 and 1877 the financial difficulties of the Government of India were too acute to admit of any sacrifice of any source of revenue. These difficulties were caused partly by famine and partly by the depreciation of silver. Sir John Strachey, the then Finance Member, was strongly in favour of the repeal of the duties on cotton goods but for financial difficulties. But he prophesied that "the time is not hopelessly distant when the ports of India will be thrown open freely to the commerce of the world." ²

On July 11, 1877 the House of Commons adopted a resolution to the following effect: "That, in the opinion of this House, the duties now levied on cotton manufactures imported into India, being protective in their nature, are contrary to sound commercial policy, and ought to be repealed without delay, so soon as the financial condition of India will permit." While transmitting this resolution to the Government of India, the Secretary of State for India observed: "It is a subject of much satisfaction to me that both Your Excellency and the Finance Member of your Council, after a careful review of the fiscal system of India, have been able to concur with me so unreservedly in the opinion that the early reduction of the duties on cotton manufactures with a view to their ultimate repeal, is a measure of great importance both on economical and political grounds." In the same despatch the Secretary of State for India suggested

¹ *Ibid.*

² Financial Statement, 1877-78.

³ Despatch from the Secretary of State for India, 30th August, 1877.

that if the financial exigencies did not admit incurring any material loss of revenue from remission of duties there were still two measures which the Government might undertake—namely, the repeal of the duty of 5 p. c. on raw cotton and the exemption from import duty of the lower qualities of cotton manufactures upon which the duty was incontestably protective.

In pursuance of this policy the Government of India repealed the duties on imported raw cotton and coarser qualities of cotton piece goods and cotton yarn (Mule No. 32 and lower numbers and water No. 20 and lower numbers), but this measure failed to satisfy the Lancashire interests. The Manchester Chamber of Commerce pointed out to the Secretary of State for India that the list of free goods required to be materially added to. Shirtings and longcloths although they may be made from 30's and coarser yarns, such as are spun in India, remain subject to the impost. In the case of yarns, the objection to the fixed limits of free list is even stronger; they are 20's water and 30's mule, whilst, as is well known, a great portion of yarn shipped to India up to 24's water 40's mule, both inclusive is spun from cotton grown in India.¹ It was therefore suggested that exemption should be extended to all goods made from yarns not finer than 30's and all yarns up to 26's water and 42's mule. The Government of India appointed a Commission in 1879 to enquire into this grievance and the Commission reported that "the real proximate source of the complaints which have arisen is the fact that there is little essential difference between the cloths which have been exempted and the large classes of cloth, otherwise styled which have not. The only effective remedy obviously is to

;

¹ Resolution of the Board of Directors of the Manchester Chamber of Commerce, 27th March, 1878.

treat similarly, whether by exemption or taxation, all cloths of the same texture, irrespective of the lengths and width in which they happen to be made up." With regard to yarns the Commission held that the claim of the Manchester Chamber of Commerce was unjustifiable as the bulk or the yarn spun by the Indian mills was below 20's mule twist and 18's water twist. The Government of India recognised that it was not reasonable that certain goods should be admitted free, while large quantities of goods of almost precisely the same character in everything but name, remain liable to duty. They therefore by a notification, dated the 13th March, 1879, exempted from duty all cotton goods containing no yarn finer than 30's.¹ This measure was not, however, approved by the majority of the Viceroy's Council but the Governor-General overruled his Council and expressed the opinion that the proposed measure was one "whereby the interests of British India are essentially affected" and that the measure should be adopted and carried into effect. This measure was hailed with satisfaction by Viscount Cranbrook, the then Secretary of State for India, but as many as seven members of his Council disapproved of it on the grounds that "it was a needless sacrifice of revenue at a time when there was a deficit in the Treasury" and that "it was inexpedient that the Viceroy should for such a purpose put into operation the power he undoubtedly possesses in any matter which he may judge to affect the interests of India." Sir E. Perry in this connection observed in his Minute, "I think the remission of cotton duties at that period was most inopportune, and that the overruling of his Council by the

¹ It is noteworthy that the Bombay Chamber passed the following resolution on the 4th March, 1879 :—"That the Government of India be urged to exempt from Customs duty all cotton goods of every size and denomination if made of yarn of 30's and under."

Governor-General was unconstitutional, and a dangerous precedent for the future if allowed to pass unnoticed."

In 1882 the improvement of the finances of the Government paved the way for the abolition of the general import duty as also the remainder of the duties on cotton goods and yarn, and with the adoption of complete free trade a long chapter of controversy was closed.

Repeal of the General Import Duty and Cotton duties.

We have seen that before the assumption of the territorial possessions of India by the Crown the rate of export duty was 3 p.c. with certain exceptions. In 1860 Mr. Wilson laid down the following dictum for the imposition of export duties :

Export Duties.

"As a general rule, when the products of our soil have to find a foreign market, and in cases in which they enter into competition with those of other countries, the direct effect of export duties must be to place our products in those countries at a disadvantage with their foreign competitors. With regard to export duties on articles which have to compete with the products of similar articles from other countries in neutral markets, the first effect no doubt is that the export duty acts to that extent as a reduction of the price paid to the producer, and is a special tax and discouragement to him as a producer ; but a further and serious danger is that your duty may exclude the articles from the foreign market altogether, but as a prohibition, and thus put an end to, or greatly limit, the production and the demand for labour." In accordance with this dictum the export duty on tea, coffee, wool, flax, jute and raw hides was abolished. But saltpetre, which was at that time a monopoly of India was thought to bear an enhanced duty and the export duty on it was raised to Rs. 2 per maund. The quantity of saltpetre exported from India was about 900,000 maunds. But this enhanced duty diminished the export of this article consider-

ably.¹ In 1865 the export duty on jute, tea and coffee was revived—but it was a retrograde measure and was passed to compensate the loss of revenue that would arise from the repeal of the income tax. In 1867 the articles subject to export duty were enumerated, the remainder being freed from duty. Thus the duty on 88 articles was abolished leaving only nine classes of articles subject to duty. At the same time the export duty on grain was raised from 2 to 3 annas per maund. The export duty on rice was the subject of a great controversy. It was argued that the export duty produced a prejudicial effect on the rice trade and the Burma trade declined in favour of Siam and Cochin China. The Government of Madras objected to the duty as a matter of principle but admitted that the duty exercised no appreciable influence on the trade. The Lieutenant Governor of Bengal remarked : “The rice export flourishes and improves, notwithstanding the small duty it has to bear.” The Chief Commissioner of Burma upheld the continuance of the duty on the ground of the enormous development of the trade and the peculiar circumstances of Burma. Sir William Muir justified the continuance of the duty on the ground that “the greater part of the export is from Burma and the land revenue assessments are extremely low ; and this duty which is a moderate tax on the profits of the peasant proprietors, is the easiest and most convenient form of supplementing the land revenue.”² The question of the export duty on food grains, apart from the question of revenue, has been discussed from the point of view of the conservation of food supply. It is asserted that the total production of food stuffs in India is not adequate to

¹ Mr. Wilson expressed a hope that the Customs duty from saltpetre might be able to present a respectable figure in the revenue. That expectation has been wholly disappointed. The augmented duty was at first fixed at Rs. 2 and afterwards reduced to Re 1 per maund. “Notwithstanding that reduction, the Indian article was found unable to compete with the new manufacture in Europe and the trade in saltpetre became and still continues in a languishing state.” *Maseley—Financial Statement, 1866.*

² Speech in the Governor General's Legislative Council, 1875.

provide the people with the food required and this insufficiency becomes accentuated during a period of scarcity. It is therefore urged that there should be a restriction on exports of food grains whether by a duty or by prohibition. An artificial reduction in the price of food grains is liable to be accompanied by a diminution of agricultural resources. It is also probable that any depression in the price of food grains might lead to the substitution for them of non-food crops such as cotton, jute and oilseeds. It is pointed out by the Fiscal Commission that "at existing prices the efficient demand of India is satisfied and there remains a surplus for export. Were the export market not open, the surplus would not be produced. The existence of this exportable surplus constitutes a most important factor in the problem of food supply for a country like India which suffers from periodical local failure of crops."¹ They have considered a policy of free export in normal years as most advantageous for the food supply of India.

The Tariff Act of 1875 repealed the export duty on six important articles such as cotton goods, grain, tanned hides, oils, seeds and spices. It is worthy of note that the export duty on cotton manufactures affected the rising cotton industry by putting it under a disadvantage in its competition with foreign products. Thus with the exception of rice, indigo and lac, all articles of export were freed from export duties. The export trade of India was considerably stimulated after 1860 but it is difficult to say to what extent the expansion was facilitated by the repeal of the duties and to what extent by the improvement in the means of communication which brought the exportable articles from the interior to the ports.

¹ Report of the Indian Fiscal Commission, p. 115.

The financial prospects of India in 1894 presented a gloomy picture. The Finance Member ^{The Tariff Act of 1894.} anticipated a deficit of 3 crores in the budget. This deplorable state in the Indian finances was brought about by the enormous fall in the gold value of the rupee as also by the heavy expenditure incurred on the frontier wars. The demand for revenue was thus extremely pressing. Even before 1894 the financial situation was by no means sound. The additional revenue secured by the imposition of new taxes was dissipated in making provision for exchange charges. In 1888-89 the exchange charge was just within the resources of the Government but since then it overtook and even passed the improvement of revenue that could be set against it¹ The only available source of revenue in these circumstances was the re-imposition of the import duty. The Finance Member in his budget while re-imposing the general import duty of 5 p.c. on all goods, excluded under instructions from the Secretary of State for India, cotton goods. He quoted the authority of the Herschell Committee that opposed the re-imposition of duty on cotton goods. "The cotton duties were the subject of vehement attack in this country. Any attempt to re-impose them would meet with great opposition. And it cannot be denied that the re-imposition of such duties would provoke a demand for a counter-vailing excise upon all cotton goods manufactured in India." The proposal for a general import duty excluding cotton goods evoked widespread opposition and criticism both from the European and the Indian public. The Hon'ble Mr. Playfair on behalf of the European mercantile community argued : "It is inexplicable from purely fiscal considerations, why woollens from Bradford, hardware from Birmingham and umbrellas from Glasgow should become subject to tariff; while cottons from

¹ Speech of Mr. Westland.

Manchester pass in free." He further remarked that "If Manchester with the help of the economic appliances suggested for her benefit by the leading scientists of the world, cannot compete with manufacturing India at a difference of $2\frac{1}{2}$ p.c. to 5 p.c., it appears to me to be a pure matter of sentiment. I strongly maintain that the maximum would not amount to a protective duty."¹

Even an official member like Mr. Stevens pointed out that "It is impossible to ignore the rapidly spreading and growing belief which is gaining currency with all classes throughout the country, that in this case, and perhaps in others, the interests of India are sacrificed to meet the exigencies of party politics in England." Dr. Rashbehari Ghose, a non-official member voiced the opinion of the Indian public in the following words: "I venture to think that the exclusion of the cotton duties from the Tariff Act would be not only a cruel wrong to the people of this country, but a grave scandal as well as a financial and political blunder. The Finance Member pointed out that any attempt to re-impose them would meet with opposition. But opposition from whom? Not from the people of this country, not from the people who would ultimately pay these duties but from the manufacturers, the merchant princes of Lancashire." Mr. Westland admitted that there were arguments on the other side but thought that like any other question of Imperial policy, the matter was one for the decision of Her Majesty's Government. The Tariff Act of 1894 was thus passed in the teeth of non-official opposition.

The re-imposition of the import duties was calculated to yield a revenue of $1\frac{1}{2}$ crores, while the total deficit amounted to $3\frac{1}{2}$ crores. Had the import duty on cotton goods been re-imposed it would have yielded $1\frac{1}{2}$ crores

Re-imposition of the import duty on cotton goods and the Excise duty on Indian cotton manufactures.

¹ Speech of Mr. Playfair on the Tariff Bill of 1894.

more and would have reduced the deficit to half a crore. Before the effects of the new Tariff Act were realised, the Secretary of State for India in a despatch adverted that if the Government of India were forced to consider the question of import duties on cotton goods they must devise measures to deprive these duties "of a protective character." He suggested that this object could be attained either by exempting from duty those classes of imported goods which clearly and directly competed with Indian manufactures or by levying on the latter an excise duty equivalent to the import duty on corresponding goods from abroad. He did not admit that there was insuperable difficulty in the administration of the countervailing excise duty as the products of the handloom industry would be exempted from it. Nor would the existence of cotton mills in the Indian States present any formidable obstacle as the question might be settled either by a customs union or by the maintenance of a customs line.

The Government of India, however, pressed by financial necessity proposed to re-impose duties on cotton goods. An enquiry conducted by Sir James Westland to ascertain the nature of competition between Indian manufactures and those from Manchester disclosed that only 6 per cent. of the goods produced in India came in direct competition with the similar products from Lancashire. As a result of these investigations, the Government of India formulated proposals to levy—

(a) 5 per cent. *ad valorem* duty on all cotton piece goods;

(b) $3\frac{1}{2}$ per cent. *ad valorem* duty on all imported cotton yarns of counts above 24.

(c) $3\frac{1}{2}$ per cent. *ad valorem* duty on all machine-made cotton yarns, of counts above 24 produced at mills in British India.

These proposals were modified by the Secretary of State for India who thought that there was no valid reason for differentiation as to rates of duty between cotton piece goods and yarns, and proposed that the duty on both should be fixed at 5 p.c. He also objected to 3½ p. c. duty on yarns on the ground that it might prove protective to India in view of the fact that English goods would have to pay 5 p. c. duty and as a corollary to this, the excise duty should be raised to 5 p. c. Further, the duty on yarns should begin with counts above 20 instead of 24 as proposed by the Government.¹

Two bills were introduced in the Indian Legislature embodying provisions as modified by the Secretary of State. The bill relating to the cotton excise duty aroused, however, considerable opposition not only from the Bombay Mill-owners' Association but from the officials as well. Sir James Westland with regard to the cotton excise duty remarked : "The proposal, I make, is not made on its own merits." The Hon'ble Mr. Playfair objected to the bill on a question of principle. He remarked : "As a principle it will bring into prominence the overpowering influence of an authority which, if exercised without regard to the immediate interests of India, may take away from this Council all independence and its representative character. It will be assumed—indeed it has already been assumed—that India is not to be allowed to develop any industrial enterprise if that enterprise is likely to compete with an English industry." The Bengal Chamber of Commerce recorded a resolution protesting against an excise duty not resorted to on its own merits, being levied on Indian goods merely as the result of a decision come to by an authority which, as alleged by the Indian Financial Member of Government, has by the constitution of India the power to enforce that decision. Mr. P. M. Mehta

¹ Despatch from the Secretary of State, 13th December, 1894.

representing Bombay urged that the policy underlying the provisions of the bill was that the infant industries of India should be strangled in their birth if there was the remotest suspicion of their competing with English manufactures. An amendment to raise the exemption limit to 24's was negatived by the Council and the bill was passed in the form in which it was introduced.

The Cotton Duties Act of 1894 failed to satisfy the cotton manufacturers of Lancashire. The cotton industry was at this time in a state of depression and it was thought (though wrongly) that the Indian duties contributed to this depression in some measure. The statistics of cotton goods trade in India did disclose that during the period when the imported goods were subject to a duty the trade expanded in a greater ratio than in the period when the goods were admitted duty free. Again, the expansion of the mill industry in India was more rapid when India was made to compete with Great Britain on equal terms. Thus the effect of the duty on the trade in cotton goods was hardly perceptible.¹ Yet the cotton manufacturers of Great Britain thought they were injured by the Indian duties and carried on a fresh agitation.

On the 21st February, 1895, in the course of a debate in the House of Commons the Secretary of State for India stated that "If it were shown on clear evidence that those duties as now imposed, had any protective character as against British products Her Majesty's Government would in concert with the Government of India consider the matter with a view to carry out loyally the declared intention to avoid protective injustice." A few days after this declaration, a deputation from Scotch manufacturers and exporters of dyed cotton goods to India urged before the Secretary of State

two points : (1) That they sent to Burma a large quantity of cotton yarns of low counts, which had to pay a duty of 5 p.c. and were thus at a clear disadvantage with similar competing yarns from Bombay and Calcutta which paid no excise duty if of number 20 and under, and entered Burma free of duty. (2) That Indian mill-made goods paid a 5 per cent. excise duty only on the grey yarns from which they were made, which yarns might be valued at 5 to 8 annas per lb. whereas bleached, dyed, woven and printed goods from the United Kingdom paid on importation a 5 per cent. duty on their value which might be from 16 annas up to 40 annas per lb. Thus goods bleached, dyed, woven and printed in India enjoyed a clear and in some cases a large fiscal advantage over similar goods imported from the United Kingdom. This deputation was followed by another deputation of Lancashire manufacturers who urged that the excise duty imposed on the products of the Indian mills of counts over 20 being only partial in its character was open to the following objections :—

(1) That the import duty imposed on cotton goods exported from England made from 20's and below, without any countervailing excise duty being imposed on goods made from similar counts in India, is absolutely protective in its character ; •

(2) That the 5 p. c. import duty charged on the *ad valorem* value of the British piece goods is not completely countervailed by the 5 p. c. excise duty charged on the yarn value of the goods made in India and that so far any portion of the value of these goods is not chargeable with excise duty, the import duty becomes protective to that extent ;

(3) That the exemption from excise duty of yarns 20's and below will encourage the manufacture of duty-free cloths.

To meet these objections two bills were introduced in the Indian Legislature to amend the Tariff Act of 1894

and the Cotton Duties Act of the same year. The bills provided that the import of yarns was to be free, the import duty on piece goods was to be reduced to $3\frac{1}{2}$ p. c. and at the same time an excise duty $3\frac{1}{2}$ p. c. was to be imposed on all woven goods, the production of yarn being free. Sir James Westland in introducing these bills emphasised that the statements of the Manchester merchants were exaggerated but yet he held that there was some truth in the contention of Manchester "that the exemption of the coarser goods creates a difference in price between the coarser and the finer, which tends to divert the course of consumption from the finer to the coarser." He did not regard it a burden upon the Indian mill industry, because the Indian mill owner would pass it on to the producer. The Hon'ble Mr. Playfair argued that there was nothing before the Council to show that goods manufactured in India entered into direct commercial competition with the goods imported from the United Kingdom and the theory of substitution under the argument that the exemption of lower qualities from taxation tended to divert the course of consumption from the higher to the lower class of goods was groundless and was disproved by the fact that the purchasers of the coarse Indian-made goods were distinct from the purchasers of the Lancashire product. It was also pointed out by him that the proposals under these bills meant a remission of taxation of Rs. $51\frac{1}{2}$ lakhs (or 37 p.c.) on Manchester goods and an increase of Rs. 11 lakhs of taxation on Indian-made goods.¹ The non-official Indian members also stoutly opposed the cotton excise duty bill but it was passed with the official majority. The Bombay Mill-owners' Association recorded in their report for that year that "the Government of India passed an Act the effect of which is to penalise by an excise the right of the inhabitants of the country to spin their own cotton into

¹ Parliamentary Paper, C-8078, p. 39.

yarns and to weave those yarns into cloth for their own clothing because of the shadowy statements of interested manufacturers in England alleging protection in favour of a native industry which has no existence except in their own imagination." Thus was closed a great controversy which lasted for more than thirty years.

Another industry that received some attention is the sugar industry. In the nineties the importation of beet sugar from the continental countries of Europe, specially from Austria and Germany, largely increased and there was a great shrinkage in the acreage under cane in India and the closing of many refineries. The exports of sugar from the above countries were encouraged by bounties and it was recognised that competition between the Indian cane sugar industry and the continental sugar industry was not on fair terms. In order to protect the Indian industry a countervailing duty on bounty-fed sugar was imposed in 1899. This duty was increased in 1902 but was subsequently abolished for one country after another as a result of the Brussels Sugar Convention of 1903 which led to the abolition of the bounty system.

Countervailing import duty on sugar.

CHAPTER XI

THE RISE OF PROTECTIONISM

We have indicated in the previous chapter the establishment of a system of free trade in India as a sequel to the British commercial policy of free trade. Neither the Indian public nor the Government of India had any power to mould a fiscal policy suited to the interests of the country. The decline of indigenous industries and the growing export of agricultural products together with the import of manufactured products led the thinking people of India to entertain grave doubts about the soundness of the commercial policy adopted in India. There were two questions in connection with Indian fiscal policy—the constitutional question which crystallised into a demand for fiscal autonomy as enjoyed by the Self-Governing Dominions and the adoption of a policy of protection for the development of national industries.

The demand for fiscal autonomy is as old as the Indian National Congress and perhaps older. Ever since the beginning of political consciousness in India there has been an insistent demand for fiscal autonomy for India but it was not conceded till after the introduction of the Reforms. The demand for fiscal autonomy was put forward with a view to the adoption of a policy of protection for fostering indigenous industries. On the 17th March, 1913, the Hon'ble Sir G. Chitnays moved a resolution in the Imperial Legislative Council recommending "the desirability, in view of the loss of opium revenue, of considering financial measures for strengthening the resources of the Government, with special reference to the possibility of increasing the revenue under a system of preferential tariffs with the United Kingdom and

the colonies." The subject of preferential tariffs was, however, a cover under which he insisted on a policy of protection and fiscal autonomy. "Protection," he said, "is a necessity to us. We want protection because we have to find employment for our people and to foster our growing industries." He wanted fiscal autonomy but thought that "the grant of it would, perhaps for years, be outside the sphere of practical politics." In the same year the Hon'ble Rai Sri Ram moved a resolution demanding an additional 5 p. c. duty on imported sugar with a view to arrest the decline of the sugar industry. The debate on this resolution gave vent to the prevailing protectionist sentiment among the non-official Indian members. But the Government of India were not prepared to accept the prevailing view. Sir William Clark emphasised the great disadvantages that would follow from the adoption of a protectionist policy.

In 1916 Sir Ibrahim Rahimtoolla moved a resolution for the appointment of a Committee to report what measures should be adopted for the growth and development of Indian industries. As to the terms of reference to the Committee, the mover suggested that (1) Whether representation should be made to the Home authorities through the Secretary of State for India for securing to the Government of India full fiscal autonomy, specially in reference to import, export and excise duties and (2) Whether (a) protection, (b) granting of bounties and subsidies, (c) guaranteeing certain rates of interest on capital invested in approved industries should be availed of in such cases and for such time as may be deemed necessary.

The outbreak of the War demonstrated the unsoundness of India's economic position. The dependence of the country upon foreign countries for the supply of her daily requirements exposed her to grave economic distress. The supply of essential articles for her staple industries was either cut off or

The influence of
the war.

reduced with the consequence that these industries were in danger of being closed down. The need for the development of essential industries was, at no period of the country's economic history, recognised with greater force than during the last war, and industrialists emphasised that the most important stimulus to the development of industries was the acceptance of the principle of fiscal autonomy. As Sir Ibrahim Rahimtoolla observed : " There is a consensus of opinion amongst the people of this country that as a condition precedent to the growth and development of industries in India, it is essentially necessary that the Government of India should have complete freedom in fiscal matters." ¹

The Government of India while accepting the recommendation for the appointment of an Industrial Commission explained that the question of tariff policy involved a constitutional issue on which they were not authorised to express an opinion. Besides, it was not considered prudent to discuss the question of protection in India without reference to the fiscal relations of the Empire as a whole and the Government assured the Council that this question would be dealt with after the war.

The introduction of constitutional reforms in India brought into prominence the question of fiscal autonomy. The Montagu-Chelmsford Report on Indian Constitutional Reforms recognised the prevalence of a widespread protectionist sentiment among the educated classes of India, and the resentment against the determination of fiscal policy for India by England. The authors of the Report observed : " Desiring industries which will give him Indian-made clothes to wear and Indian-made articles to use, the educated Indian looks to the example of other countries which have relied on tariffs, and seizes on the admission of even free traders that for the nourishment of nascent industries a

¹ Proceedings of the Imperial Legislative Council, 1916.

tariff is permissible. We do not know whether he pauses to reflect that these industries will be largely financed by foreign capital attracted by the tariff, although we have evidence that he has not learned to appreciate the advantages of foreign capital. But, whatever economic fallacy underlies his reasoning, these are his firm beliefs ; and though he may be willing to concede the possibility that he is wrong, he will not readily concede that it is our business to decide the matter for him. So long as the people who refuse India protection are interested in manufactures with which India might compete, Indian opinion cannot bring itself to believe that the refusal is disinterested or dictated by care for the best interests of India."¹ The report, though it did not make any concrete proposal with regard to policy, nevertheless recognised that any decision on this question should be taken with full appreciation of educated Indian opinions.

The evidence before the Joint Select Committee on the Government of India Bill emphasised the need of fiscal independence.² The report of the Joint Select Committee on the Government of India Bill pointed out that " A satisfactory solution of the question can only be made by arrangements which seem best fitted to India's needs as an integral portion of the British Empire. Whatever be the right fiscal policy for India, for the needs of her consumers as well as for her manufacturers, it is quite clear that she should have the same liberty to consider her interests as Great Britain, Australia, New Zealand, Canada, and South Africa."³

¹ Montagu-Chelmsford Report, p. 160.

² *Vide* Evidence of Mr. Hasan : " As to fiscal autonomy I must lay special stress on the grant of fiscal independence to India. Without it the industrial development of India is altogether impossible. It is also necessary, in the continued interest of the British Empire, that each component part of it should have the power to develop its resources, to the best advantage without outside interference."—Evidence before Joint Select Committee, p. 218.

³ Report of the Joint Select Committee on Government of India Bill, 1919, p. 10.

The Committee desired that a convention for the attainment of this purpose should be established and that the Secretary of State should, as far as possible, avoid interference with this subject when the Government of India and its Legislature were in agreement subject to international obligations and fiscal arrangements within the Empire.

On the 23rd February, 1921, the Hon'ble Mr. Lallubhai Samaldas moved the following resolution in the Council of State : "This Council recommends to the Governor-General in Council that His Majesty's Government be addressed through the Secretary of State for India with a prayer that the Government of India be granted full fiscal autonomy under the direction of the Indian Legislature." The object of this resolution was to secure a clear pronouncement on the subject. The observations of the Joint Select Committee were subject to two limitations. In the first place, the phrase "as far as possible" might be used to modify or tone down anything ; secondly, "international obligations and the fiscal arrangements within the Empire" as modifying India's right to determine her own fiscal policy was objectionable. "What we want to have is that we should have the same rights as are being enjoyed by the Dominions. We want a definite assurance that we will have those rights without qualifications." Dr. (now Sir) T. B. Saprú on behalf of the Government pointed out that the acceptance of the resolution, in the form in which it had been moved, would mean "the over-riding" of some of the clear provisions of the Government of India Act. He suggested an amendment "subject to the provisions of the Government of India Act, 1919" in lieu of the words "under the direction of the Indian Legislature." Sir William Vincent thought that the resolution proposed that the Government of India was to be subject to the Legislature in the matter of fiscal autonomy and this was inconsistent with the provisions of

the Government of India Act.¹ The Secretary of State for India enjoys special powers in controlling legislation in India, *viz.*, initial consent and interim veto, and what was wanted was that so far as fiscal legislation is concerned the Secretary of State should surrender these powers. The resolution accordingly did not over-ride the Government of India Act as it was merely a request that a convention of non-interference in regard to fiscal legislation was to be built up. The amended resolution, *viz.*, "This Council recommends to the Governor-General in Council, that His Majesty's Government be addressed through the Secretary of State for India, with a prayer that the Government of India be granted full fiscal autonomy subject to the provisions of the Government of India Act," was adopted by the Council of State.

The financial position of the Government of India was at this time extremely embarrassing. Faced with a deficit, they were obliged to propose increased duties on the various classes of imports including cotton goods. The increase in cotton duties from $7\frac{1}{2}$ to 11 p.c. dissatisfied Lancashire and a deputation from Lancashire waited on the Secretary of State on the 23rd March, 1921. The Secretary of State, in reply to this deputation, said: "After that report by an authoritative Committee of both Houses and Lord Curzon's promise in the House of Lords, it was absolutely impossible for me to interfere with the right which, I believe, was wisely given and which I am determined to maintain—to give to the Government of India the right to consider the interests of India first, just as we, without any complaints from any other parts of the Empire, and other parts of the Empire without any complaint from us, have always chosen the

¹ Council of State Debates, 1921, p. 272.

tariff arrangements which they think best fitted for their needs, thinking of their own citizens first."

In 1920 the question of fiscal arrangements within the Empire was taken up. A Committee was appointed to examine the trade statistics and to consider and report whether or not it was advisable to apply to the Indian customs tariff a system of preference in favour of goods of Empire origin. But this Committee found that the problems raised before them were of such a far-reaching character that they recommended their consideration by an appropriate Commission.

The financial stress caused by the war profoundly affected the character of the Indian tariff. Important changes were introduced in the tariff to increase revenue. The tariff of 1922, however, travelled a long way from the tariff in force before the war. The general rate of duty was raised from 11 to 15 p.c. but the duty on cotton goods remained unchanged at 11 p.c., the excise also remaining unchanged at $3\frac{1}{2}$ p.c. The duty on machinery was retained at $2\frac{1}{2}$ p.c. but the duty on iron and steel and railway materials was raised from $2\frac{1}{2}$ to 10 p.c. The duty on matches was doubled and that on sugar was raised from 15 to 25 p.c. Cotton yarn which had since 1896 been free was taxed at 5 p.c. The duty on kerosene oil was raised by one anna per gallon and a corresponding excise duty was imposed on oil produced in India. Though Sir Malcolm Hailey pointed out that he had endeavoured to limit his proposals in such a way "as not to involve any important change of principle in the existing fiscal arrangements,"¹ there was no escape from the conclusion that some of the duties were of a protective nature.

¹ Financial Statement, 1922-23.

With regard to export duties it is to be observed that in 1916 two new export duties—one on jute and the other on tea—were imposed. In 1919 an export duty of 15 p.c. was imposed on raw hides with a view to protecting the Indian tanning industry. But this measure contained a novel principle by providing for a rebate of two-thirds of the duty on hides and skins exported to the Empire countries and there tanned.

An important effect of these tariff changes has been a great increase in the customs revenue. The pre-war average revenue from customs and cotton excise was 9·84 crores which rose to 48·21 crores in 1927-28.

The appointment of the Indian Fiscal Commission in 1921 is a landmark in the history of Indian fiscal policy. To this Commission was entrusted the task of examining, with reference to all the interests concerned, the tariff policy of the Government of India including the question of the adoption of the principle of Imperial Preference. The Indian Fiscal Commission were impressed with the fact that the industrial development of India had not been commensurate with the size of the country, its population and its natural resources. They endorsed the opinion of the Industrial Commission that "The industrial system is unevenly, and in most cases, inadequately, developed ; and the capitalists of the country with a few notable exceptions have till now left to other nations the work and the profit of manufacturing her valuable raw materials or have allowed them to remain unutilised." The Commission held that a considerable development of Indian industries would be very much to the advantage of the country as a whole, creating new sources of wealth, encouraging the accumulation of capital, enlarging the public revenues, providing more profitable employment for labour, reducing the excessive dependence of the country on the unstable profits of agriculture and

Indian Fiscal Commission.

stimulating the national life and developing the national character.¹ They pointed out that many of the obstacles to the development of industries in India were fast disappearing and that "a time has come when India is prepared to take advantage of any stimulus applied to her industries." The Indian Industrial Commission suggested certain measures such as improvement in education and extension of banking facilities and technical assistance but these were inadequate to inspire confidence and encourage enterprise. The Commission, therefore, thought that it was the stimulus of protective duties that was necessary for the development of industries. They endorsed the view of Prof. Pigou that "the case for protection with a view to building up productive power is strong in any agricultural country which seems to possess natural advantages for manufacturing. In such a country the immediate loss arising from the check to the exchange of native produce for foreign manufactures may well be outweighed by the gain from the greater rapidity with which the home manufacturing power is developed."² The majority of the Commission recommended a policy of protection to be applied with discrimination. There were certain disadvantages incidental to the policy of protection but if this was applied with discrimination, the inevitable burden on the community would be as light as would be consistent with the due development of industries.

The minority of the Commission, however, wanted an unqualified pronouncement that the fiscal policy best suited for India was protection. The policy of protection recommended by the majority of the Commission connotes that discrimination should be exercised in the selection of industries for protection and in the degree of protection afforded. To carry out this policy they proposed the creation of a Tariff Board,

¹ Report of the Indian Fiscal Commission, p. 80.

² *Ibid.*, p. 41.

The function of the Tariff Board would be to consider the claims of protection for any industry. In dealing with all claims of protection, the Tariff Board should in the first instance satisfy itself that the following three conditions are fulfilled :—

(1) The industry must be one possessing natural advantages, such as an abundant supply of raw material, cheap power, a sufficient supply of labour or a large home market. Such advantages will be of different relative importance in different industries, but they should all be weighed and their relative importance assessed. The successful industries of the world possess certain comparative advantages to which they owe their success. No industry which does not possess some comparative advantages will be able to compete with them on equal terms.

(2) The industry must be one which without the help of protection either is not likely to develop at all or is not likely to develop so rapidly as is desirable in the interests of the country.

(3) The industry must be one which will eventually be able to face world competition without protection.

It will appear from the conditions that the second is a corollary of the first and the third contemplates only temporary protection.

The Commission further recommended that industries for purposes of national defence and for the development of which conditions in India were not unfavourable should be adequately protected, if necessary. With regard to export duties it was laid down by the Commission that they were to be imposed when circumstances permitted—only for revenue purposes, but not for the purpose of affording protection. Apart from the feeling of resentment against export duties on raw materials in foreign countries, the disadvantage is that they will prove a serious burden upon the producer if the protective effect of the duty is to be realised. On this

ground the export duty on hides and skins and on oil seeds is condemned. Further, they were opposed to the introduction of a general system of Imperial Preference but if preference was allowed in some cases such preference should not in any way diminish the protection required by Indian industries. The policy of protection as advocated by

the Commission raised the question of Foreign Capital. foreign capital. It is argued that if under a system of protection foreign capital is attracted to Indian industries, the advantages of the sacrifice made by Indians will go to the foreigner and, therefore, restriction should be imposed upon the influx of foreign capital into the country. The majority of the Commission thought that as there was a lack of capital in the country, without the aid of foreign capital the industrial development would not be accelerated. It was also urged by them that the foreign capitalist would import into the country "the technical knowledge and up-to-date methods which are essential" for India's industrial development, and thus the main advantage from the employment of foreign capital would remain in the country. An exception to the unrestricted admission of foreign capital was made in the cases where some form of Government concessions was granted. In such cases it was recommended by the majority that the Government should insist on the Indian character of the companies in rupee capital, a reasonable proportion of Indian directors and reasonable facilities for training Indian apprentices.

The minority of the Commission, however, were opposed to the unrestricted admission of foreign capital into the country. They held that there was no valid reason for the distinction drawn between a bounty and a protective duty as in both cases the people were called upon to sacrifice either as tax-payers or as consumers. They, therefore, recommended that every foreign company, desiring to establish an industry after the policy of protection has been adopted in India, should be

subjected to the same conditions as were proposed by the majority in the case of favoured companies.

On the 16th February, 1923, Mr. Jajnnadas Dwarkadas moved a resolution in the Assembly for the acceptance of a policy of protection by the Government. The resolution was as follows:

The principle of protection accepted by the Government.

“This Assembly recommends to the Governor-General in Council that a policy of protection be adopted as the one best suited to the interests of India, its application being regulated from time to time by such discrimination as may be considered necessary by the Government of India with the consent and approval of the Indian Legislature.” This resolution was accepted by the Government with some reservations. Sir Charles Innes pointed out that the Government was prepared to accept in principle the proposition that the fiscal policy of the Government of India might legitimately be directed towards fostering the development of industries in India and that in the application of the above principle of protection, regard must be had to the financial needs of the country. Further, the policy of protection should be applied with discrimination, with due regard to the well-being of the community and subject to the conditions laid down by the Fiscal Commission. Though during recent years the rates of duty on imports were raised substantially and these afforded protection to some of the local industries, yet the principle of protection was not deliberately adopted. But the acceptance of this principle marked an epoch in the fiscal history of India. The Commerce Member thought that the time was not opportune for the adoption of a policy of protection as the industrial depression in the European countries would compel them to fight for markets open to them.¹ But the truth is that this was the time when Indian industries required protection most if they were to be saved

¹ Legislative Assembly Debates, 1923, p. 2357.

from the ruinous effects of foreign competition. Much apprehension was felt for the interests of the agriculturists and the middle classes. It was argued that a policy of protection would diminish the prices of agricultural products by limiting their markets and would raise the cost of living of the agriculturists by raising the prices of imported goods. But the Commission pointed out: "Provided, however, protection is applied with discrimination we do not think that the burden imposed either on the agricultural producer or through a rise in the prices of agricultural produce on the consumer in general, need be sufficient to make us hesitate regarding the net advantages of the policy we recommend."¹ In the course of the debate it was also urged that the Fiscal Commission while recommending a policy of protection tried to render that policy as ineffectual as possible by loading it with unworkable conditions. Objection was taken specially to condition (2) that the Tariff Board shall afford aid only when an industry claiming protection is able to show that it is not likely to develop at all, or to develop so rapidly as is desirable, without protection. It is not difficult to conceive that there may be a great divergence of opinion among experts as to the potentiality of an industry. Nor will it be easy for experts to prophesy that an industry would eventually be able to face world competition without protection, as industrial changes are so rapid in these days. It was, therefore, proposed that "the fact that although there exist natural advantages for an industry and it has not made rapid progress under existing regime, should be considered sufficient proof that protection is needed in its case to inspire capital with confidence and to make the progress of the industry rapid."²

Doubts were expressed as to the continuity of the policy of protection by the Government by several members, but

¹ Report of the Indian Fiscal Commission, p. 45.

² Legislative Assembly Debates, 1928, p.

the Commerce Member gave a pledge that "the passing of the resolution would pin down at any rate the Government of India to that policy." The resolution as amended by the Government was accepted by the House.

With the war an era of industrial expansion dawned upon the country. The lessons taught by the war brought about a remarkable change in the industrial position of the country as also in the outlook of its business men as compared with those of 1913. Government experienced a great shortage of materials required for munitions and the industries were handicapped on account of interruptions in the supply of machinery and stores. The Munition Board under the leadership of Sir R. T. Holland was started with the object of applying the manufacturing resources of India to war purposes. The high prices of imported articles induced the industrialists to throw themselves wholeheartedly into industrial ventures all over India. But the industrial boom was short-lived. With the restoration of peace conditions, the industries of the world became suddenly involved in a great depression. The fall in the prices of the staple commodities of the world trade was enormous, and India could not escape the terrible effects of the depression. The competition of imported products with the manufactures of the country became unusually severe and a strong demand developed in the country for protection to the nascent industries.

With the acceptance of the principle of protection by the Government of India, various industries began to put forward a claim for protection. The Tata Iron and Steel Company was the first Indian concern that claimed protection for the steel industry. Their proposal was that a duty of 33½ p.c. *ad valorem* should be imposed on all kinds of steel manufactured by the Company at Jamshedpur. It was pointed out that foreign steel was likely to enter India, at a price,

Steel industry—its claim for protection.

without duty, of Rs. 150 per ton and that the Company could not sell steel at a reasonable profit unless the price was Rs. 200 a ton." The question of protection to the Steel Industry was referred to the Tariff Board which was appointed by a resolution of the Government of India in the Department of Commerce.¹ The Board were directed also to investigate the effect of their recommendations upon industries dependent on the use of steel.

In their report to the Government of India, the Tariff Board pointed out that India possesses great natural advantages for the production of steel and iron and that the first condition laid down by the Fiscal Commission is fulfilled. Not only does India possess high grade iron ores in large quantities but they are situated in close proximity to the coal fields. This is important because the freight on raw materials is a heavy item in the cost of production. With regard to the supply of coking coal the conclusions of the Board were: " (1) There are sufficient supplies of coking coal available to meet the needs of a steel industry capable of providing for India's own requirements and a certain surplus for export for over a century; (2) the question whether coking coal exists in sufficient quantities to justify the establishment of a large export trade in steel cannot be settled until further surveys and explorations have been made; (3) the information at present available suggests the desirability of conserving India's resources of metallurgical coking coal."² In respect of fluxing materials India does not possess the same superiority as in ore but economically is at no disadvantage. In respect of labour the country suffers under a disadvantage which is

¹ Resolution No 3173, dated the 10th July, 1923.

² Report of the Tariff Board regarding the grant of protection to the Steel Industry, p. 12. The Tata Iron and Steel Company stated that they believed they had 400 million tons of coking coal in their mines in the Jheria and Raniganj fields.

inevitable in any country that is about to pass from an agricultural into a manufacturing stage. During the transition period it is necessary to rely on imported skilled labour but this is a temporary difficulty and would eventually disappear. Further, India has a fairly large market for steel as the total consumption of iron and steel is in the neighbourhood of one and a half million tons. The Board expressed the opinion that "provided there is an adequate expansion of transport facilities there would be room for two or three steel works each with an output comparable to that of the works at Jamshedpur."¹ As regards the second condition which related to the necessity of protection the Board held: "Our deliberate opinion is that without the help of protection, the steel industry is not likely to develop at all."² They recognised that the industry was passing through an extremely difficult transition period and "if the efforts of the firm which had been the pioneer of steel manufacture in India were to end in disastrous failure all prospects of further development for the next ten or fifteen years would be at an end." As regards the third condition whether the industry would eventually be able to face world competition without protection, the Board held that though years must elapse before Indian labour acquired the necessary skill and experience yet India's natural advantages were so great that steel would be produced at a cost low enough to face outside competition. This opinion was further strengthened by the consideration that the Company was already producing pig iron more cheaply than other countries and a considerable export trade with Japan, Australia and the West Coast of America had developed recently. There was another ground to be emphasised. The importance of steel manufacture in a country from the point of view of national

¹ Report of the Tariff Board regarding the grant of protection to the Steel Industry p. 15.

² *Ibid*, p. 16.

defence was demonstrated during the war, and on this basis the case for protecting steel was overwhelmingly strong.

The general principles that should guide the scheme of protection were stated by the Board as follows :

(1) The difference between the price at which steel is likely to be imported from abroad and the price at which the Indian manufacturer can sell at a reasonable profit is the natural measure of the amount of protection required.

(2) If protection is found to be necessary the measures taken must be adequate to secure their purpose.

(3) The scheme of protection should be so adjusted as to interfere as little as possible with the products which are not manufactured in India at present and are not likely to be manufactured in the near future.

The Board found that there was a wide gap between the price at which steel was imported and the price at which the Indian industry could sell its products at a profit. The analysis of cost of production in the Indian concern disclosed that it was not possible to sell steel at a price below Rs. 180 per ton if a fair return to capital was to be secured but at the same time steel was imported at Rs. 140 a ton without duty. As to adequacy of protection it is necessary that the scheme of protection should not merely aim at the preservation of the existing industry but should aim also at attracting new capital to the industry so as to produce the stimulus of internal competition. "The capitalist," the Board observes, "must look for an assurance that protection will be continued to the extent necessary for the full period which must elapse before anticipations can be tested by results."¹ The Tariff Board recommended the following scale of duties on the various kinds of steel imported into India :

¹ Report of the Tariff Board, 1924, p. 19.

Structural shapes	...	...	...	Rs. 80 a ton
Plates	...	...	...	„ 80 „
Bars and rods	...	...	...	„ 40 „
Sheets	...	...	...	„ 80 „
Galvanised sheets	...	...	...	„ 45 „
Rails (under 80 lbs.) and fish plates	...	...	...	„ 14 „

These duties would work out at 20 to 30 p.c. *ad valorem*. The change from the *ad valorem* to the specific duty is due to the consideration that when protection and not revenue is the goal, specific duty is preferable. Because, in the case of *ad valorem* duties when prices are high and protection is least needed the customs duties are highest, while when prices are low and the need for protection is greatest the duties are also low.

As an alternative to the method of protection as a means of developing an industry, the question of
 Bounty. bounty may deserve consideration. It is recognised that the grant of protection to a basic industry may affect prejudicially other industries dependent on it and the best means of assisting a basic industry like the steel industry is by means of a bounty. Whatever might be the merits of such a method, financial considerations precluded the possibility of its application on a large scale. It is only with regard to heavy rails and fish plates that the scheme of a bounty was recommended. It was pointed out by the Tariff Board that the Tata Iron and Steel Company was under a contract to sell rails at a fixed price and the rise in the price of rails by means of a protective duty would not benefit the manufacturer and “the imposition of a tariff duty must be nugatory.” Another reason assigned was that this method would prevent the increase in railway costs. The proposal of the Tariff Board was, therefore, that bounties should be given on the

manufacture of rails and fish plates in accordance with a sliding scale for three years—Rs. 32 a ton in 1924-25, Rs. 26 in 1925-26 and Rs. 20 in 1926-27.

In order to make the scheme of protection effective it was proposed that the Governor-General in Council should be armed with extraordinary powers to vary the rate of duties. The course of world prices was uncertain and a further fall in price might render protection ineffective. It was, therefore, proposed that "If the Governor-General in Council is satisfied, after such enquiry as he considers necessary, that steel is entering India from abroad at such prices as are, likely to render the protection given by the Act ineffective, he may impose such additional duties as in his judgment are required."

The recommendations of the Tariff Board regarding the grant of protection to the Steel Industry were accepted by the Government and they introduced a bill in the Legislative Assembly to give effect to these recommendations in May, 1924. In the course of the debate on the bill Sir Charles Innes pointed out that it was difficult to forecast the future course of prices, but taking a broad view one would anticipate a keen competition between the powerful, efficient and mature steel firms of Great Britain and the Continent on the one hand and the Tata Iron and Steel Company which was yet young. He accepted the proposition that "If the Indian industry is to survive it must have temporary assistance during the present transitional period, and that if it does not it will be squeezed out."¹ As to the extent of protection the Commerce Member pointed out that the duties proposed by the Tariff Board though lower as contrasted with Australia yet "having regard to the relative poverty of India" were undoubtedly heavy. As to the form of protection

Steel Protection Act
of 1924.

¹ Legislative Assembly Debates, 1924, p. 2284.

a system of bounty for three years might save the existing industry but would not attract new capital into the industry and hence protective duties offered the best alternative under the circumstances. The bill met with a considerable amount of opposition from European commercial interests. Mr. Wilson representing the Associated Chambers of Commerce argued that the scheme of protection, if adopted, "would penalise the whole steel trade. The steel trade is a basic one. By putting up the price of your steel, you will be putting up the cost of living everywhere; you will be putting up the cost of transport, you will be putting up the cost of roads and bridges, you will be putting up the cost of domestic improvements in municipal and utilitarian concerns." He, therefore, pleaded that immediate assistance should be given in the form of a bounty. It was, however, pointed out that very few countries of the world developed their industries by means of a bounty. As regards the effect of increased duties on steel on railways the Tariff Board found that "the increase in the capital expenditure of all the railways would be Rs. 15·4 lakhs of capital and Rs. 13·2 lakhs of revenue or about Rs. 29 lakhs in all. These figures are approximately 7 per cent. of the capital outlay and 2 per cent. of the working expenses."¹ Further, other industries would be affected very little as machinery was not subjected to a protective duty. With regard to agriculture it was urged that the Indian agriculturist was very poor and a higher price of steel would mean that the implements of his daily work would cost him more. This alleged burden upon agriculture is more imaginary than real, for the quantity of steel consumed by the agriculturists is very small. As the Tariff Board points out: "If all the steel bars imported into or produced in India were

¹ Report of the Tariff Board regarding the grant of protection to the Steel Industry, p. 74.

used for no other purpose than to provide the agriculturist with steel, an increase of the duty to 30 per cent. would mean an annual burden of about Rs. 43 lakhs spread over a population of 300 millions." Pandit Malaviya while endorsing the view that the Tata Iron and Steel Company deserved protection objected to that aspect of the bill which held out an invitation to foreign companies to build up steel factories in India without adequate safeguards. He thought it was against common sense that there should be "a proposal to tax the public generally in order that foreigners should come and establish certain factories in the country."¹

The provision of the bill relating to the grant of bounties on rails and fish plates raised a great controversy. The Tariff Board did not lay down any conditions for this purpose. The Indian non-official members wanted that bounty should be granted under distinct conditions and such conditions should be incorporated in the bill. Pandit Matilal Nehru, therefore, moved that "no bounty in respect of steel rails, fish plates or wagons shall be payable to or on behalf of any company, firm or other person not already engaged at the commencement of this Act in the business of manufacturing any one or other of such articles, unless such company, firm or person provides facilities, to the satisfaction of the Governor-General in Council, for the technical training of Indians in the manufacturing processes involved in the business and, in the case of a company, unless (a) it has been formed and registered under the Indian Companies Act, 1913, (b) it has a share capital the amount of which is expressed in the memorandum of association in rupees, and (c) such proportion of the directors as the Governor-General in Council has by general or special order prescribed in this behalf consists of Indians." This amendment was

accepted by the Government as Government was already committed to this principle. The Steel Protection Act was to be in force for three years after which the matter was to be investigated again by the Tariff Board.¹

A few months after the passing of the Steel Protection Act, the Tata Iron and Steel Company represented to the Government that the protection afforded by the Act was rendered ineffective on the ground that the prices actually realised for steel manufactured at Jamshedpur were much below Rs. 180. There was a substantial fall in the sterling prices of Continental steel, at the same time the rise of the rupee-sterling exchange from 1s. 4d. to over 1s. 6d. caused a further fall in the rupee price of the imported steel. The Company consequently asked for an increase of duties.

The Tariff Board were called upon to advise the Government of India whether the circumstances were such as to justify the exercise of the power delegated by the Legislature and, if so, to what extent. The Board found that there was no change in the prices of British steel but owing to the collapse of the French and the Belgian exchanges, the prices of Continental steel declined down to the pre-war level. There was a wide gap between Continental prices and British prices and the difference in the case of bars was £3 15s. Further, the rise in the rupee-sterling exchange meant a fall of Rs. 16 per ton. The methods considered by the Board to deal with the situation were (1) differential duties against countries in which prices had fallen to a very low level, (2) Imperial Preference, and (3) a general increase of duties. With regard to differential duties the French Commercial Convention of 1903 was regarded as an absolute bar to any scheme which would propose to discriminate against steel imported from

¹ This Enquiry is designated "Statutory Enquiry."

particular countries. There was, however, no international agreement which would prevent the imposition of a lower rate of duty on steel imported from the United Kingdom, so as to obtain the desired object. But Imperial Preference as a principle should be decided on its merits and as the Legislature did not yet pronounce its verdict upon this issue, the Tariff Board rejected this alternative. They were thus left with the last alternative, viz., an all round increase of duties on the various classes of steel which came into competition with the Indian manufactures.

The Government of India, however, did not accept the proposals for enhancement of duties. They accepted the findings of the Tariff Board that the protection afforded by the Act of 1924 was rendered ineffective by the fall in the prices of the Continental steel and by the rise in the rupee-sterling exchange, but they thought that relief should be granted to the Tata Iron and Steel Company by bounty rather than by an increase in protective duty. Sir Charles Innes in introducing a bill for the grant of bounties emphasised that British steel was displaced to some extent by Continental steel on account of its low price and the real competition in the Indian market was between Continental steel and Tata's steel. If protection was to be made successful the duty would have to be raised to 50 to 70 p.c. of the value of the articles. Such a step would mean a burden on the consumer out of all proportion to the benefit which would be conferred on the industry. As Sir Charles Innes pointed out: "The maximum benefit to the industry if the price had risen to the full extent of the duty would be Rs. 50 lakhs, whereas the burden on the consumer would have amounted to about Rs. 2 crores." It was, further, held that owing to heavy accumulation of stocks the

Steel Bounties Act
of 1925.

duty would not produce any substantial immediate effect on price. Another argument for the acceptance of the scheme of bounty was that the surplus from the protective duties would provide the source from which the bounty was to be paid without any additional burden upon the tax-payer. The provisions of the bill were as follows :

(1) The bounty should be paid only to firms or companies manufacturing steel ingots mainly from pig iron from Indian ores.

(2) The bounty should be paid on steel ingots at the rate of Rs. 20 a ton on 70 p.c. of the total output of steel.

(3) The total amount of bounty should not exceed 50 lakhs of rupees during the twelve months from 1st October, 1924 to 30th September, 1925.

In their enquiry on the grant of supplementary protection to the steel industry the Tariff Board found that conditions in the steel trade were relatively stable but there was no sign of the revival of prosperity in the iron and steel industry of Europe. The price at which steel was sold by the European countries "left little or no surplus over the cost of production." The Board held that there would remain a considerable difference between the prices to be actually realised by the Indian manufacturer and the standard prices fixed at the time of the passing of the Steel Production Act of 1924.¹ They, therefore, advised the Government to continue the supplementary protection till the Statutory Enquiry was completed and that the supplementary protection should be given as far as possible in the form of a bounty. The Board recommended the grant of bounty at the rate of Rs. 18 per ton subject to a maximum of Rs. 90 lakhs. The Government of India while accepting the finding that further assistance was required reduced the rate from Rs. 18 to Rs. 12 per ton subject to a maximum of Rs. 60 lakhs.

¹ Report of the Tariff Board regarding the grant of Supplementary Protection to the Steel Industry, p. 12.

The Act of 1924 was limited to a period of three years at the end of which it was assured that a Statutory Enquiry would be undertaken to review the progress of the industry under the scheme of discriminating protection. That Enquiry demonstrated the success of the policy adopted. As the Tariff Board says : " That the protection actually received by the Company has enabled it to survive a most difficult transition period not merely without losses but in a state of improved and growing efficiency cannot, we think, be questioned." ¹ As a matter of fact, with the assistance received from the public, the Company was able not only to meet the works costs and interest on debentures and loan charges, but to pay full dividends on its first preference shares and a partial dividend on its second preference shares and set aside a substantial sum for depreciation. It is worthy of note in this connection that in addition to the benefit of a protective duty, a sum of rupees 209 lakhs was paid to the industry from the public exchequer.

There was a considerable increase in the production of steel. Thus in 1923-24 the total production of finished steel amounted to 162,282 tons which rose to 319,957 tons in 1925-26, while the estimate for 1926-27 was 380,000 tons. This increased production was accompanied by a substantial reduction in the works costs of the various classes of steel manufactured justifying the anticipations of the first report.²

¹ Report of the Statutory Enquiry on Steel Protection, p. 16.

² Reduction in works costs, *vide* Report of the Statutory Enquiry on Steel Protection :—

	1923-24	1924-25	1925-26	August, 1926
	Rs. per ton	Rs. per ton	Rs. per ton	Rs. per ton
Pig iron	36.28	82.71	28.48	25.21
Steel Ingots	71.02	65.1	57.27	51.27
Rail and Structural mills	120.98	111.44	101.53	85.1
Bar mills	132.55	131.82	111.14	105.9
Plates	142.1	145.8	124.3	108.3

Improved methods combined with the working of the Greater Extensions resulted in more economical production. It is also significant to point out that the policy of protection was not burdensome to the consumer as the prices of steel in India were for the greater part of the period considerably below those prevailing immediately before the protective scheme came into force.¹ So far as the replacement of imported labour is concerned good progress was made. The number of covenanted men was reduced from 222 in September, 1924 to 161 in June, 1926 and the saving on this account was about 3 lakhs annually.

Though there was satisfactory progress in the financial condition of the Tata Iron and Steel Company during the period of protection, the course of trade precluded the possibility of discontinuing protection. As the Tariff Board says: "If the rupee price of imported steel had remained at the 1923 level, little or no protection would be required. Prices of imported steel have, however, fallen substantially and unless protection is continued it will not be possible to manufacture and sell Indian steel in competition with the imported product."²

The extent of protection to be given to the industry depended largely upon the course of prices of imported steel. Though the price of British steel fell rapidly since 1924 and the gap between the Continental and the British price was narrowed down, the difference was still substantial. It is undoubtedly true that British steel was superior to Continental steel and a part of the difference in price might be accounted for this. But the difference was so large that the Tariff Board had to display a good deal of ingenuity in the adjustment of duties so as to secure protection to the Indian industry without substantial injury to British interests. A system of uniform duties levied with reference to Continental

¹ Report of the Statutory Enquiry on Steel Protection, p. 17.

² *Ibid*, p. 98.

price, the Board thought, would impose a heavier burden on the consumer, of standard British or Indian steel than would be under a system of differential duties. On the other hand, if the rate of duty fixed is low and Continental steel is sold in India at very low prices "the Indian industry may be forced in self-defence to lower its standards, and the quality of Indian steel might deteriorate." Therefore, the rate of duty should be fixed with reference to British price. There was another advantage of this step in that the British price approached stability whereas Continental prices were uncertain. Further, the industry should be assured of at least a minimum amount of protection not subject to variation during the period for which the scheme was to be adopted. "On economic grounds," the Board observed, "it is advisable that two scales of duties be imposed, a basic duty fixed with reference to the price of British steel and an additional duty based on the margin between British and Continental prices to be levied on non-British steel." The period of protection was limited to seven years and the scale of basic duty was considerably reduced. The system of bounty was discontinued.

A Bill was introduced in the Delhi Session of the Legislative Assembly in 1927 embodying the recommendations of the Tariff Board.

The Act of 1927.

The Preamble of the Bill stressed the necessity for the continuance of protection to the Tata Iron and Steel Industry but in the body of the Bill was introduced the novel principle of preferential treatment of British steel. The non-official members as also the Indian Merchant Chamber protested vehemently against the introduction of "a far-reaching principle by a back door."¹ Sir Charles Innes, however, had to strain every nerve to convince the House that the measure was not one of preferential treat-

¹ Assembly Debates, 1927, pp. 123 and 142—Speeches of Pandit Malaviya and Mr. Jayakar.

ment. He said: "I do not admit there is any preference at all. The Tariff Board have definitely told us that in the economic intesests of India they can recommend only one plan and Government have accepted that opinion." It is worthy of note that neither the Tariff Board nor Sir Charles Innes was consistent in this matter. Thus, in their second enquiry the Tariff Board pointed out: "Imperial Preference is a very large question on which the Government of India and the Legislature have not yet pronounced, and the issues involved are quite as much political as economic. Ordinarily, no more in the direction would be made until the case had been fully discussed in all its aspects, and we cannot advise the Government of India to use the power which was delegated for a special purpose, to introduce, as it were by a side wind, Imperial Preference for steel."¹ In the Statutory Enquiry the Board observed: "Our enquiry is confined to economic issues, and if a system of differential duties is desirable in the interests of India on economic grounds, for the adequate protection of Indian industries, and for a fair adjustment of the burden involved, we do not feel debarred by political considerations from recommending it."² Sir Charles Innes, however, while assuring the House that the Government had no intention of adopting any general measure of Imperial Preference admitted that the proposed lower scale of duties for certain classes of British steel was "discrimination, preference if you like to call it, in favour of the British manufacturer." There is no doubt that the British Iron and Steel Industry required relief, as it was in a state of depression, but the method adopted by the Government was disapproved by the Indian public. But in spite of the opposition of the non-official members, the bill was passed for a period of seven years. The grant of protection to the Indian steel industry led to a demand

¹ Report of the Tariff Board regarding the Increase of Duties on Steel, p. 28.

² Report on Statutory Enquiry.

for protection to other industries dependent upon steel, and the claim of the engineering industry deserves our consideration first.

The engineering industry covers a wide variety of products from the manufacture of bolts and nuts to the construction of the largest railway bridges. This industry is a large user of steel. It was urged that the scheme of protection accorded to the steel industry would very seriously affect the interests of this industry by raising the price of its most important raw material. The Indian Engineering Association in their representation to the Government stated :

(a) That if the Tariff Board found that the steel making industry required protection, such protection should take the form of bounties rather than of import duties.

(b) That the engineering industry should preferably be encouraged and protected by Government orders at competitive Indian prices rather than by import duties or bounties; but

(c) That if State aid in this form could not be given, then the engineering industry should be protected by import duties or bounties, to precisely the same extent as the steel making industry was protected.

This claim for protection to the engineering industry was examined by the Tariff Board. It is to be observed that this industry had been in existence in the country for many years and it maintained itself in spite of the disadvantages of having to import most of its raw materials from abroad. The importance of this industry from the standpoint of industrial development cannot be over-estimated as it is in this industry that technical training can be secured which is essential for the country. The claim of this industry, consequently, for compensating protection was held by the Tariff Board to be legitimate.¹ But its claim for

¹ First Report of the Tariff Board on Steel Protection.

bounties or guaranteed orders was dismissed on financial grounds. The evidence regarding foreign competition satisfied the Board in recommending the raising of the duty on fabricated structural steel from 10 to 25 p.c. This recommendation was accepted by the Government.

• There was a similar claim for protection for the Wagon Building industry as in the case of the engineering industry. The building of wagons in India was carried on to some extent even before the war by two firms but they did not specialise in this branch to the exclusion of all other kinds of work. The establishment of the Standard Wagon Company after the war altered the position of this industry. It was complained by the Company that the fall in the price of imported wagons since October, 1922, very seriously affected the Indian industry and the low tender for wagons by the British firms hardly covered their cost of materials and there appeared to be a deliberate attempt "to kill the manufacture of wagons in India." The industry would also be affected by the proposed higher duties on steel and it was claimed that it should be protected against dumping and the higher cost of steel.

The Tariff Board recognised the importance of this industry to India as it would afford an outlet for the products of the steel industry but there appeared no prospect of its development except at some cost to the State. The proposal for the imposition of higher duties on steel would raise the cost of materials used by this industry. But the difference between the price of imported wagons and the cost of production in India was so large that compensating protection would afford only partial relief to the industry. Besides, a high protective duty on wagons would largely increase railway costs. The Board consequently proposed the encouragement of this industry by a bounty in accordance with a sliding scale. It was also recommended that the

Indian manufacturer "should have some assurance of continuity of orders" if the scale of production in the industry was to enlarge. As regards the condition of bounty it was laid down that the manufacturer should as far as possible use Indian materials. These recommendations were not, however, accepted by the Government on financial grounds.

Another industry whose claim for protection was investigated by the Tariff Board was the
Tin Plate Industry. Tin Plate industry. It originated during the war owing to the difficulties experienced by the Oil Companies in obtaining their supplies of tin plate. The grounds on which protection was claimed were (1) high capital expenditure due to a more elaborate equipment than that in Western countries on account of climatic conditions and (2) the employment of a large number of imported workmen entailing the payment of higher wages. This industry possesses the same comparative advantages as the steel industry in respect of raw materials and power supply. Tin has to be imported but India is not at any comparative disadvantage as contrasted with the United Kingdom. Of the disadvantages the first is a permanent handicap but the second one is likely to disappear with the training of Indian operatives. From the start the Tin Plate Company produced tin plate of good quality and the prospects were sufficiently favourable "to warrant some assistance from the State." The Board consequently recommended the imposition of a specific duty of Rs 60 a ton equivalent to 15 p.c. *ad valorem* on foreign tin plate. Two other industries, *viz.*, wire and wire nails and agricultural implements, were also recommended for protection. Protection in the case of the latter industry was recommended because it was not needed as a permanent measure but as a temporary expedient to enable the industry to get a foothold in the Indian market and increase its production rapidly.

The remarkable progress made by the Tin Plate industry fully justified the policy of discriminating protection. Production increased from 9,000 tons in 1923 to approximately 35,000 tons in 1926 and the works costs fell from Rs. 459 per ton to Rs. 313 per ton.¹ A notable increase in the efficiency and skill of Indian labour was achieved and it was found to reduce the number of employees by approximately one-third. The Tariff Board held that with a reasonable measure of protection it would be established on a firm basis. The scale of duty was reduced from Rs. 85 to 48 per ton and the period of protection was fixed at seven years.

The paper industry in India was in a stagnant condition before the war. This was perhaps due to the development of mechanical pulp industry in European countries which offered cheaper paper to India.

The war reduced considerably the supply of imported paper and there was a phenomenal rise in its price. Thus an impetus was given to the paper industry and four new mills were projected, the most important of which was the Indian Paper Pulp Company of Nailhati (Bengal). With the commencement of the post-war trade depression the paper industry was faced with serious financial difficulties. In 1923 the Indian Paper Makers' Association represented to the Government that without protection the industry would be ruined. Their proposal was that all kinds of paper should be subjected to a protective duty of 25 p.c. It was not claimed that every kind of paper was or could be produced in India but it was asserted that eventually the country would be able to supply nine-tenths of its requirements. The annual consumption of paper in India varied between 90,000 to 100,000 tons and the Indian production exceeded

¹ Report of the Statutory Enquiry on Protection to the Steel Industry.

30,000 tons and there was thus a fairly large market in the country. It was claimed for the Indian Paper industry that "it possesses a natural advantage in the existence of an abundant supply of suitable raw materials, namely, sabai grass and bamboo," but it was impossible for the Indian mills using Indian raw materials to manufacture at a cost which would enable them to compete with the imported news print.¹ The Tariff Board in their enquiry into the claim for protection were satisfied that the paper made from sabai grass was strong and durable. But they expressed grave doubts as to whether the supply of grass was abundant. The evidence on the point of abundance of supply of sabai grass was conflicting.² The real question is whether grass can be obtained at a price which makes it economically advantageous. The Indian paper-maker has to draw his supply of grass from fields lying at a distance of 500 to 900 miles from the factory. This difficulty, however, may be obviated by locating the factory near the raw material but this advantage is wiped off by the freight on coal. It is significant to note that the concentration of all the best coal deposits in India in one locality is an obstacle which retards the development of India's material resources in the less favoured regions. The Tariff Board observes: "The paper mills of India which use sabai grass have no natural advantage."³ The position of bamboo as a raw material for the manufacture of paper is different from that of sabai grass. It is inferior to sabai grass in strength and durability but for the cheaper kinds of paper it is admirably suitable. The supplies of bamboo in India and Burma are not only sufficient to meet the needs of all the paper mills in India but there would remain a surplus from which an export trade in pulp might eventually develop. Further, bamboo can be landed in a mill accessible by water

¹ Report of the Tariff Board on Paper Industry, para. 19.

² See Pearson's Evidence.

³ Report of the Tariff Board on Paper Industry, para. 105.

transport from the forest at a cost low enough to make it a great deal cheaper than wood. Another advantage of bamboo is that it reproduces itself automatically after three, four or five years whereas it takes a far longer time in the case of wood. With regard to chemicals it was found by the Tariff Board that most of the chemicals required for the manufacture of paper were now made in India and only a few of them were imported. It was, therefore, recognised that the manufacture of pulp and paper from bamboo might in time become a very important industry and the prospects were favourable enough to justify the grant of State assistance. The assistance contemplated was to be limited for a period of five years and the Government were advised not to commit itself finally to protection. The Tariff Board recommended a uniform specific duty of Rs. 140 per ton on all printing and writing papers which would work out at 25 p.c. *ad valorem* on better kinds of paper and 35 p.c. on the cheapest varieties, but news print containing not less than 65 p.c. of mechanical pulp should be exempted from the protective duty. These recommendations resulted in the Bamboo Paper Industry Protection Act of 1925.

Repeal of the Cotton
Excise Duty and the
demand for protection.

We have stated in the previous chapter the circumstances under which an excise duty on the Indian mill protection of cotton piece-goods was imposed. Ever since its imposition not only Indian publicists but impartial Englishmen condemned this duty as an unsound impost as it violated the fundamental principles of an excise tax. In 1911, the Hon'ble Mr. Maneckji Dadabhoy moved a resolution in the Imperial Legislature for the repeal of the excise duty as the mill industry was in a state of depression. The Member for Commerce opposed the resolution on three grounds: (1) the removal of this excise duty would operate prejudicially against the trade of Manchester; (2) the Government were not in a position to forego the revenue from the excise

duty and also the loss in customs that would follow from a reduction of imports ; (3) the excise duty acted as a protection to the great handloom industry of India and the Government were not prepared to withdraw that protection. The third argument loses its force when it is remembered that it was the difficulty in the collection of the excise duty which induced the Government not to excise the handloom. Besides, when we admit a real competition between handlooms and powerlooms a $3\frac{1}{2}$ p.c. duty hardly affords any protection for the former.¹ The real danger apprehended was the displacement of Lancashire goods and loss of revenue which at this time became important. From the financial point of view the duties were objectionable as the main burden of these duties fell upon the poorest classes of this country.² The question of cotton excise was reopened during the last war. In 1916 Lord Hardinge gave a definite pledge that the excise duty would be abolished "as soon as financial conditions will permit." But there was no improvement in the financial condition during the war, but, on the contrary, it grew worse. A proposal to increase the excise duty in 1922 by 4 p.c. when the import duty on cotton goods was proposed to be raised to 15 p.c. was rejected by the Legislative Assembly even when the Finance Member was in dire need of funds. Sir Malcolm Hailey observed : "I will admit all the theoretical arguments against the cotton excise duty. I admit that it has an unhappy history. I admit that in itself it is not a good tax, because it is a tax on production and not on profits. But I say, let us have this tax, if it is only for six months, until the

¹ The Indian Fiscal Commission holds a contrary view : "We have not overlooked the fact that at the present moment the duty operates to some extent as a protection to the handloom industry. We fully realise the importance of handloom industry, and we welcome the grant of assistance to it. But there are many other ways, besides the indirect method of an excise duty on mill goods, by which the handloom industry may be encouraged."—Report of the Indian Fiscal Commission, p. 99.

² This is the view of Mr. Gokhale. See his Speech—Proceedings of the Imperial Legislative Council, 1911.

Fiscal Commission can give us a scientific readjustment which will give us money without reproducing the undesirable incidence of the present tax."

The Fiscal Commission recommended that "the existing cotton excise duty" should in view of its past history and associations, be "unreservedly condemned" and the Government of India should frankly express their desire to "clean the slate." The post-war depression in the cotton industry rendered the abolition of the excise duty imperative but the financial conditions of Government prevented the grant of this relief. In 1924 Mr. Kasturbhai Lubhai moved the following resolution in the Legislative Assembly: "This Assembly recommends to the Governor-General in Council to take early steps to abolish the cotton excise duty as recommended by a majority of the Indian members on the Indian Fiscal Commission and to be pleased to direct the Tariff Board to further examine the question of protection at an early date." In the course of the debate on this resolution Sir Charles Innes did not think that the "tax had harmed the Bombay cotton industry" though he recognised that "this tax had done great political harm." He quoted figures to show that the progress of the industry inspite of the "slight handicap" had been remarkable since 1896, the year of the imposition of the excise duty. The Bombay mill-owners, however, contended that "it is perfectly true that this industry has progressed very much but had it not been for this excise duty it might have progressed still further." It was, however, asserted by the Commerce Member that the grievance of the Bombay mill-owners was not real as the gap between the import duty and the excise duty was $7\frac{1}{2}$ p.c. Further, as the price of cloth in the Indian market was determined by the price of the imported cloth the abolition of the excise duty would not mean a reduction in the price of cloth but would fill the pockets of the mill-owners.

As regards the claim of protection for the industry Government thought it was absolutely unwarranted. Indian mills produced 93 p.c. of the yarn consumed in India and as regards cloth Indian production accounted for 62 p.c. of the total consumption, and in the face of these figures Sir Charles Innes observed : " It is absurd to say that any general measure of protection is required." But in spite of the opposition of the Government the resolution was accepted by the Assembly.

The rapid fall in the prices of cotton goods accompanied by serious labour troubles placed the industry in a serious and embarrassing situation. There was a persistent demand for relief and the Government was compelled to repeal the excise duty in 1925. But the depression in the industry was so acute that the Bombay Mill-owners' Association had to represent to the Government for an enquiry into the causes of the prevailing depression and to suggest the measures which might be taken to restore it to prosperity. In their representation, the Bombay Mill-owners' Association emphasised the growing unfair Japanese competition as one of the contributing causes of the depression in their industry and demanded protection against Japanese goods. They pointed out that the industry was handicapped to the extent of 8 p.c. on account of the depreciation in the Japanese exchange and an additional 5 p.c. on account of double shift working by the employment of female labour at night in the Japanese mills. The Indian industry thus required an additional protection of 13 p.c. in order to be placed in an equal position with foreign countries in respect of the cost of manufacture and a further additional protection to enable the Bombay mills to make the necessary allowances for depreciation of plant and machinery. Government appointed a special Tariff Board to examine the causes of depression and to ascertain whether the industry was in need of protection, and if so, in what form and for what

period protection should be given. The Tariff Board in their report pointed out that the three world factors, viz., the altered relation between the agrarian and the general prices since 1920, the cyclical character of trade throughout the world, and the violent fluctuations in the price of raw cotton, contributed mainly to the present depression in the Indian cotton textile industry. The problem of Japanese competition, however, presented a complicated feature. The import of yarn from Japan since the year 1920-21 increased from 5 million lbs. to 33·6 million lbs. in 1925-26. But as contrasted with the Indian production of 686·4 million lbs. the Japanese imports appear insignificant being only 4·9 per cent. Therefore, theoretically, Japanese imports of yarn cannot be an important factor in price determination. But the real basis of comparison is not the total production of yarn by the Indian mills but the amount which is available for sale. This amounted to 271·4 million lbs., and of the total amount of yarn offered for sale the Japanese imports account for 12·3 per cent. only. There is another factor to be noted. The bulk of the imports of yarns from Japan were between 31's and 40's and these amounted to 20 million lbs. and were almost equal to the Indian mill production of yarn of those counts. Hence the Japanese competition is a determining factor in the valuation of yarn of these counts. Further, as the Tariff Board says. "In view of the fact that there is a definitive relative value between the prices of the various counts of yarn sold and that a fall in the price of yarn of counts 30's or 40's, therefore, affects the price of lower counts in a varying degree, it must be held that the competition of Japanese yarn exercises a depressing effect on the price of Indian yarn." ¹ In regard to certain classes of piece-goods Japanese competition is an important factor. As the Tariff Board says: "It is evident that the cost of

¹ Report of the Tariff Board (Cotton Textile Industry), p. 84.

manufacture alone of cloth of 30's and above in Indian mills apart from profit and depreciation is practically equal to or higher than Japanese sale price."¹ But this competition, it has been alleged, is unfair. The labour conditions in Japan are inferior to those of India. Of the six International Labour Conventions Japan ratified only one, *viz.*, that which fixes the minimum age for the admission of children to industrial employment. The employment of women and young persons at night enabled the Japanese mills to work double shift and this resulted in economy in the cost of production. The Tariff Board pointed out that double shift working in Japan gave the Japanese industry an advantage of 4 per cent. on the actual cost of manufacture of both yarn and cloth. This advantage is considerably increased if a reasonable return on capital is included in the cost of production. The Tariff Board, therefore, held "that there is unfair competition between Japan and India and that this competition is an important cause of the present depression in the cotton textile industry."²

The rise in exchange to 1s. 6d. gold "rendered the problem presented by the disparity between prices and wages in the industry somewhat more pronounced."³ The loss of China trade in yarn is another factor which very adversely affected the industry.

This leads us to the consideration of the claim of the industry for protection. The Bombay Mill-owners' Association claimed an additional duty of 17½ p.c. on cotton manufactures imported from countries from which there was unfair competition, or as an alternative a heavy duty should be levied on coarse goods, a moderate duty on medium classes

¹ Report of the Tariff Board (Cotton Textile Industry), p. 50.

Ibid.

³ Mr. Hari Kissen Kaul thinks that the rise in exchange has had both a direct effect on the condition of the industry and on its ability to compete in foreign markets and an indirect effect by reducing, to some extent, the purchasing power of the agriculturist.

of goods and a low duty on higher counts. Of the 17½ p.c. duty 8 p.c. was required for depreciated exchange in Japan, 5 p.c. for unfair labour conditions and 4½ p.c. for depreciation of machinery. The Ahmedabad Mill-owners' Association claimed additional duties to the extent of 12½ p.c. on all cotton manufactured goods of counts up to 60's from whatever country imported and lower duties on those of counts above 60's. The Tariff Board rejected the proposal of a differential duty on Japanese goods as it involved the abrogation of the Commercial Convention of 1905 which allowed Japan "the most favoured nation treatment." Nor did they favour the imposition of an additional duty on the manufactures of non-British countries on the grounds that it would raise the question of Imperial Preference and the importation of the goods of foreign origin through ports within the Empire.

A high protective duty on all goods as proposed by the Ahmedabad Mill-owners' Association would involve a serious burden upon the consumer and could be regarded as legitimate if the industry was infant but the cotton industry was not infant in this sense, having been established more than three-quarters of a century ago. But the claim of the industry for protection so far as unfair competition is concerned is legitimate. But even in this case the claim of the Indian industry was held to be exaggerated. The stabilisation of the yen exchange rendered any provision for it unnecessary. Nor can an industry claim protection for depreciation of fixed capital for it is a part of the normal cost of production of an industry and must be recovered from price. The Tariff Board consequently held that in addition to the protection afforded by the present duty of 5 p.c. on yarn and 11 p.c. on cloth, a moderate measure of protection could be justified for such period as the labour conditions in Japan continued to be inferior to those of India. The majority thought that the most effective way of

securing this protection to the cotton industry would be to impose an additional duty of 4 p.c. on all cotton manufactures other than yarn. It was also held that this additional duty would afford relief against the maladjustment between costs of production and falling prices which resulted from a rise in the gold value of the rupee. They considered the imposition of the additional duty on yarn undesirable as it would react unfavourably on the handloom industry. The majority appreciated the necessity for diversification in production in order to strengthen the position of the industry. It was emphasised that attempts should be made for the development of finer spinning and a stimulus to the production of goods of higher quality could best be given in the form of a bounty on the spinning of higher counts of yarn. The majority, therefore, recommended that a bounty of one anna per lb. or its equivalent on yarn of 32's and higher counts based on production of an average of 15 p.c. of the total working spindleage in a mill in British India, would meet the situation, and the cost of the bounty was to be met from the proceeds of the increased duty proposed.

The President of Tariff Board in his minute of dissent objected to the proposed bounty on principle. In his opinion a long established industry like the Bombay cotton mill industry should need no stimulus at the expense of the general tax-payer to a development which was in its own interests. Further, the proposed bounty would not improve the position of the industry as the depressing effect on the price of the yarn on account of Japanese competition would continue. Therefore, the President held that the maximum duty which could be justified was one which would offset the actual advantage per pound of yarn or per pound of cloth manufactured, derived from double shift working in Japan. He recommended the imposition of a differential duty of 4 per cent. on all cotton manufactures imported into India from Japan.

In their resolution on the report of the Tariff Board, the Government of India pointed out that "no case had been established for a general increase in the duty as a measure of protection." They accepted the finding of the Board that the Japanese cotton mills had an advantage over those of India and this advantage amounted to 10 p.c. and not $12\frac{1}{2}$ p.c. as reported by the Tariff Board. The advantage to Japan was fully covered by the revenue duty of 11 p.c. on cotton piece-goods. "The existing revenue duty on yarn is only 5 p.c., and in this case, if the calculation of the majority is accepted, the advantage to the Japanese mills is not fully covered."¹ But in the interests of the handloom industry no increase in the duty was thought justifiable. A partial relief was granted to the industry by remitting the import duty on cotton textile machinery and mill stores. This decision of the Government of India dissatisfied the cotton manufacturers of India. A conference of the representatives of cotton spinning and weaving mills of India declared that "the true economic interests of the country have been sacrificed and the welfare of the cotton textile industry and those dependent on it has been seriously jeopardised by the unjust decisions of the Government of India which entirely fail to protect the industry against unfair competition."²

The case of the cotton mill industry was again pressed before the Commerce Member at a meeting arranged by the Committee of Bombay Mill-owners' Association at which representatives from other centres were present. This was followed by a deputation of mill-owners to the Viceroy and the result was that the the Indian Tariff (Cotton Yarn Amendment) Bill was introduced in 1927.

¹ *Ratnagor—Bombay Industries, Cotton mills*, p. 8.

² *Ibid.*

The Commerce Member in introducing the bill said that its sole object was to safeguard the manufacture of cotton yarn in India against unfair competition and not to grant protection in a general way. It was a temporary measure and would remain in force up to 31st March, 1930. The proposal contained in the bill was that the duty on yarn should be fixed at 5 p.c. *ad valorem* or one and a half annas a lb., whichever was higher, and that this duty should be applicable to yarn imported from all countries.

It is to be pointed out, however, that this bill was based on the finding of the Tariff Board that there was unfair competition between India and Japan in respect of the production of yarn, but it did not incorporate the remedies proposed either by the majority or the minority of the Tariff Board. This unfair competition was attributed to the employment of women at night and double shift working in Japan whereas in India the employment of woman labour was prohibited at night. This is undoubtedly a valid argument and the "Indian manufacturer," as Sir George Rainy says, "is quite entitled to come to the Legislature and say, 'If I am to be subjected to a restriction, such as the prohibition of night work by women from which my rivals in other countries are free, then I ought to be compensated in some way because these restrictions raise my cost of production.'"¹ Thus, a new principle was introduced in the fiscal legislation of the country, namely, the principle of safeguarding an industry against unfair competition and this may arise from the grant of bounties or subsidies by foreign Governments or from the restrictions imposed by the law of the country itself.

Under the plan proposed the duty was intended to compensate the disadvantage of 10 p.c. under which Indian mills were working in their competition with Japan, as the

¹ Legislative Assembly Debates, 1927, p. 8157.

specific duty of $1\frac{1}{2}$ annas per lb. would approximately be 10 p.c. *ad valorem* at the prevailing price of yarn of lower counts. The Preamble of the Bill contained the principle of 'safeguarding' but the Select Committee substituted 'protection' for 'safeguarding' with the result that the country was committed to the principle of protection for the cotton industry. As the measure was against the unfair advantage enjoyed by Japan, it was intended to be continued till March, 1930, when the new Factory Law of Japan prohibiting the employment of women and children at night would come into operation.

The measure was opposed on two grounds. In the first place, it did not satisfy the mill-owners as the extent of protection afforded to the industry was inadequate. Secondly, it was opposed on the ground that it would prejudicially affect the handloom industry. But in spite of this opposition the bill as introduced was passed by the Assembly.

Another minor industry that claimed protection is the cement industry. The rapid fall in price
Cement Industry.

which commenced in 1922 produced a great depression in the Indian industry necessitating a demand for protection. The Indian cement industry claims that India possesses great natural advantages in the supply of raw materials such as limestone, clay and gypsum. There is no disadvantage with regard to supply of labour as the industry does not necessitate the employment of highly skilled labourers from abroad. In respect of fuel the cement industry has natural advantage because with one exception all the factories are situated at such a distance from the coal fields that the freight on coal is a very serious item in the cost of production.

- The Tariff Board were satisfied as to the natural advantages possessed by the industry for production but from the point of view of market it was under a handicap, as, with the exception of two factories at Kathiawar, all were situated

at a considerable distance from the ports which were the chief consuming centres. The industry, however, possesses a naturally protected market in up-country centres owing to railway freight on imports. The chief problem was how to assist the industry so as to enable it to capture the market in the ports where Indian cement had to compete with British cement. The manufacturers pointed out that the export price of British firms was considerably lower than the domestic price and the export price was unremunerative.¹ They claimed a specific duty of Rs. 25 per ton. The Tariff Board were satisfied that the cement industry would eventually be able to meet world competition without special assistance. But the price prevailing at the time was below cost of production and "unless assistance was given more than half the companies would have to shut down." The Tariff Board recommended that this assistance should be given in the form of a bounty on consignment to a port and not in the form of a protective duty. It was found by them that the productive capacity of the Indian factories was far in excess of demand and no rapid growth in consumption could be expected unless the price was kept relatively low. Further, as internal competition was so acute that the price was cut down to a level below works costs and the protective duty would be inoperative in raising the price. It is difficult to understand that a policy of protection was not thought appropriate even for a short period in a market where dumping was taking place. But the Tariff Board recommended a bounty on export to ports instead of a protective duty. They also thought that some sort of combine or working agreement was necessary in order to enable the industry to sell at a profit.

The Government of India disapproved of the recommendations of the Tariff Board on the ground that there

¹ Report of the Tariff Board on Cement Industry, p. 80.

was no valid reason for granting bounty to an industry that was suffering from the evils of over-production.

The establishment of match factories by the Swedish Match Industry. Company which was a huge combine aroused considerable alarm among the Indian manufacturers. This Company attempted to secure controlling interest in many of the Indian factories. It was contended that the Swedish Match Company having at its disposal very large financial resources endeavoured to crush the local manufacture by unfair competition, by a systematic cutting of prices and by propaganda of an objectionable type. The case of this Company illustrated the danger of unrestricted admission of foreign capital under a protectionist regime. It was, therefore, proposed that Government should introduce special measures to curtail the activities of the Swedish Match Company.

The Tariff Board found that the allegation of unfair competition so far as imported matches were concerned was true as the Company was importing matches into India at an abnormally low price. But the price at which the products of the Company's factories in India were sold did not disclose that there was unfair competition. The point, however, is that the entry of the Swedish Company stimulated internal competition which brought down the abnormal profits of the industry. The works costs of the Company were higher than those of Indian concerns and the average price realised by the Company was higher than that by the Indian manufacturers. The Company also attempted to secure a controlling interest in many of the Indian concerns and spoil the reputation of Indian matches by unscrupulous propaganda. As the Tariff Board says: "We have seen advertisements of the Swedish Match Company which, in some cases explicitly, in others by implication, condemn the products of all Indian match factories without reserve. We must confess that it strikes us as curious that a foreign

firm should repay the hospitality offered to it by India by belittling the quality of Indian manufactures as a class.”¹

The rapid fall in revenue owing to the diminution of imports raised the question whether the existing duty should be lowered or be converted into a protective duty. As to the suitability of the match industry for protection, the Tariff Board held that it satisfied all the three conditions laid down by the Fiscal Commission. As regards the first condition, the industry possesses definite natural advantages in having a large home market and an adequate supply of cheap labour. As regards raw material, there is an assured supply of timber in Burma, Bengal, Assam, the United Provinces and the Punjab to satisfy half the total demand in India. In Bombay, however, the supply of timber is inadequate and the industry will have to depend very largely on imported aspen. For continuity as well as expansion of the supply of timber a systematic scheme of plantation will have to be undertaken. The rapid growth of the industry under the high revenue duty satisfies the second condition that the industry should be one which without the help of protection is not likely to develop at all or is not likely to develop as rapidly as is desirable in the interests of the country. As regards the third condition whether the industry will eventually be able to face world competition without protection, the Swedish Company contended that it is “out of the question that the industry could ever dispense with protection.”² The reply to this contention is that the works costs of the Company’s factories in India have fallen from Re. 1-12-2 to Re. 1-0-3 per gross during a

¹ Report of the Tariff Board on Match Industry, p. 85.

² “The cost of manufacturing matches in India is at present considerably higher than the cost of manufacturing matches in Sweden including freight from Sweden to India, and it is hardly probable that this difference can be materially reduced.”—Memorandum of Mr. Ivar,

period of four years,¹ and a similar fall, though not to the same extent, has taken place in other Indian factories. This reduction in the cost of production has been brought about by an increase in production, by the introduction of modern machinery, by the improved efficiency of labour and, to some extent, by a fall in the price of chemicals. Further, the future selling price of imported matches has been estimated at not less than Re. 1-1-4½ per gross and this figure is comparable with the fair selling price of Indian matches which has been estimated at Re. 1-4. It will be manifest from this that the industry satisfies the third condition also.

There remains now the question whether the industry needs protection. The Tariff Board found that with a revenue duty of 15 p.c. the price of imported matches would be equal to the fair selling price of Indian matches and, therefore, no protection might be necessary. But the need for protection arose from two causes: (1) the importation by the Swedish Company at a price below the economic level and (2) a prejudice against Indian matches resulting in the offer of a lower price. It was asserted by some of the Indian concerns that a difference of at least 2 annas per gross in the wholesale market was necessary to induce the consumers to purchase Indian matches.² It was observed by the Tariff Board that "If the difference were to disappear it cannot be doubted that the sale of imported matches would largely increase" and this difference might disappear in the retail market were the duty decreased by four annas only. The immediate effect of any such measure would be to transfer demand from the Indian to the imported match with the consequence that many Indian factories would be closed and the industry would receive a set-back from which recovery would be extremely

¹ Report of the Tariff Board on Match Industry, p. 82.

² Representation of Esavi Indian Match Manufacturing Company.

difficult." Nor could it be said that the consumers would derive any benefit from a reduction of duty, as the industry was in such a stage that the price was determined by internal competition and the products of some of the factories were as good in quality as the imported matches. An additional reason for the maintenance of the duty at a high level is the uncertain attitude of the Swedish Company as regards their price policy, for they might prefer importation from Sweden to local manufacture. The Tariff Board, therefore, recommended the continuance of the import duty of Re. 1-8 and its transference from the revenue to the protective part of the schedule.

Two other important industries that applied for protection are coal and petroleum. Coal industry, as has been seen in a previous chapter, has been passing through a serious depression and demanded a protective duty on imported coal. This claim was rejected on the grounds that the import was insignificant and coal was a raw material for all industries. The case of petroleum was, however, entirely different. The Indian industry engaged itself in a price war with foreign companies. It failed to establish that there was dumping of foreign oil in India.

It has been seen that the policy of discriminating protection was first applied to the steel industry. Although there were at first serious misgivings as to the success of this policy, the progress of the industry justified the risk undertaken by the Government. The Act of 1927 limited the period of protection to seven years and before that period expired the industry was again put to the searching examination of the Tariff Board. It was contended by the Tata Iron and Steel Company that the protective system broke down because the surplus anticipated by the Tariff Board of 1926 was not fully realised. It is, however, to be observed that during this period, the industries of the world

The Steel Protection Act of 1934.

were overtaken by the great depression that commenced in 1929. The Indian Iron and Steel industry did not suffer to the same extent as the industries of other countries. As the Tariff Board says : " During 1927-28 to 1932-33 the works have steadily maintained an output roughly equivalent to 75 per cent of their capacity. Few steel industries in the world have been able to maintain such an output." ¹ Another criterion that we may adopt to measure the success of the protective system is the proportion of the Indian market which is now supplied by the Indian industry. In the year 1927-28 the Company's production was 429,000 tons and its share of the available market was 30 per cent. In 1932-33 the output was 427,000 tons and the proportion had risen to 72 per cent, and this fact shows unmistakably that the industry is now in a position to face world competition. Turning to the figures of costs of production, the Tariff Board finds that they have fallen in all sections produced by the Company and " the improvement in the efficiency of the works which was anticipated by the Board in 1926 has been fully realised." ²

¹ Report of the Tariff Board on the Iron and Steel Industry, p. 12. If we take the peak year (1929) as representing the output of the respective plants, the percentage of capacity of ingot steel produced in 1932 in the chief countries was as follows :—

	Per cent
France	57
Germany	35
U. S. A.	24
United Kingdom	54
Belgium	68

² Report of the Tariff Board on the Iron and Steel Industry, 1934, p. 29.

	Works costs, 1926	Adjusted costs, 1933
Bails	Rs. 79'6 (per ton)	Rs. 56'0 (per ton)
Flahplates	" 116'4 "	" 86'52 "
Structural sections	" 105'3 "	" 60'0 "
Bars	" 99'0 "	" 59'63 "
Plates	" 103'3 "	" 62'56 "
Bar and billets	" 71'4 "	" 44'86 "
Black sheets	" 164'0 "	" 85'54 "
Galvanised sheets	" 263'7 "	" 115'54 "

It is true that the anticipations of the Tariff Board of 1926 regarding the financial results of the Company were not fully realised, but no Tariff Board, however careful its forecasts may be, could take into consideration all the factors that affected the industry. The fall in the demand for steel products due to industrial depression could not be foreseen by the Tariff Board. Nor could they anticipate that the industry would be subjected to a loss of Rs. 220 lacs on account of the strike. They also could not foresee the loss that resulted from the curtailment of orders from the railways for rails and sleepers, and also the loss of demand for tested steel for engineering and other purposes. These considerations are sufficient to demonstrate that the Tariff Board of 1926 were not careless in their calculations. On the contrary, it must be said to their credit that the measures recommended by them ensured the interests of the producers and the consumers of steel. The Tariff Board of 1934 found that although the Act of 1927 had achieved a large measure of success, the unsettled economic condition of the world would not permit the discontinuance of protection altogether. On a careful examination of the prices of imported steel and the fair selling price of the Indian steel, the Board came to the conclusion that there was still a gap between the British price and the Continental price. The British price was stable but the Continental price, as it was regulated by a cartel, was extremely uncertain. The selling price of the Indian steel approximated the British price but was higher than the Continental price. Therefore, it was not appropriate to expose the Indian steel products to the competition of the low-priced Continental goods. Thus, the differential system which was the basis of the Act of 1927 was continued. The main principles underlying the scheme of protection recommended by the Tariff Board are formulated as follows :

- (1) On articles sold by the Steel Company in direct

competition with British imports either no protective duties are required at all or if any are required the rates are lower than the normal rates of revenue duty.

(2) The extent to which protection is required by the Indian Steel Industry is largely conditioned by the proportions in which tested and untested steel are demanded.

(3) The need for protection is due to the low price of untested steel in which competition comes from the Continent. It is against this competition, based on indeterminate and uneconomic prices, that the Indian industry now requires protection.

A question may, however, be asked whether the natural advantages possessed by the Continental steel industry are such that the Indian industry may never be able to dispense with protection. To this question the answer of the Tariff Board is that "advantage possessed by the Indian industry in the low cost of its pig iron is sufficient to offset the economy obtained on the Continent by the use of the Basic Bessemer process. With the reduction in the works costs, which we have estimated, we believe that by the end of the next period of protection, Indian works costs will be no higher than on the Continent."

The passing of the Indian Tariff (Cotton Yarn Amendment) Act, 1927, did not bring any appreciable relief to the industry as it excluded piece goods from the scheme of protection.

The years 1928 and 1929 were marked by serious labour troubles and general strikes in the Bombay cotton mills. The industry became still more depressed and the competition of imports from Japan became keener than ever. The import of piece goods from Japan increased from the pre-War average of 3.1 million yards to 562 million yards

•
Developments in
Cotton Tariffs—Protection
for piece goods.

in 1929-30. In 1929 Mr. G. S. Hardy was appointed to examine the possibility of introducing a system of specific duties on cotton piece goods, and to ascertain what changes had occurred since 1926 in the volume of imports, the classes of goods imported and the extent and the severity of external competition with the products of the Indian mills. Mr. Hardy found that a change to a system of specific duties would be on the whole undesirable. As regards external competition, his report indicated that Japan's progress had been rapid and uninterrupted, largely at the expense of the United Kingdom, and the Indian industry was exposed to the competition of Japan. In the circumstances some measure of protection was urgently called for to save the industry from complete collapse.

At the same time the financial embarrassment of the Government necessitated a revision of the tariff for increased revenue. The Finance Member, therefore, proposed an increase of the revenue duty on cotton goods from 11 to 15 per cent and at the same time an additional protective duty of 5 per cent with a minimum specific duty of $3\frac{1}{2}$ annas per pound on cotton goods of non-British origin. These measures evoked a storm of protest from the non-official members of the Legislature who disapproved of the principle of differentiation in favour of British goods.¹ The Bill was also attacked partly on the ground that no protection was needed² and on the ground that the protection afforded was inadequate. The Finance Member defended his proposals, firstly, on the ground that with an advantage varying from 4 to 11 per cent large quantities of British goods had been replaced by Indian manufactures and there was nothing to justify the imposition of a duty in excess of 15 per cent by way of protection against British goods; and secondly, the raising of the

¹ Assembly Debates, 1930, p. 1745, Speech of Pundit M. M. Malaviya.

² *Ibid.*, p. 1767, Speech of A. H. Guznavi.

duty to 20 p.c. all round would impose an undue burden on the consumer, raising the cost to him of enormous quantities of goods which are not in effective competition with Indian manufactures.

. An amendment proposing to make the duty on all cotton piece goods 15 p. c. or $3\frac{1}{2}$ annas per pound whichever is higher was defeated ; the Government accepted another amendment by which the minimum specific duty of $3\frac{1}{2}$ annas a pound was made applicable to all plain grey goods including those of British origin, and with this alteration the Bill was passed into law.

Even before this Act was passed, India was in the grip of the world-wide economic depression which seriously affected the financial position of the Government of India. To meet the large deficit disclosed by the Budget for 1931-32 an additional duty of 5 per cent was added to the import duties on piece goods and in the following September an additional surcharge of 25 per cent was imposed on all imports. The consequence of these measures was that on British goods the duty was 25 per cent and on non-British goods $31\frac{1}{4}$ per cent.

The suspension of the gold standard by Great Britain introduced a complicated factor in the tariff system of India, for the example of

Suspension of the
gold standard by Gr. at
Britain.

Great Britain was shortly followed by Japan and the yen exchange was greatly depreciated. The consequence of this depreciation of the Japanese currency was that the exports of cotton manufacturers from that country were greatly stimulated at very low prices. It was alleged by the Indian manufacturers that the protection contemplated by the duties of 1930 was rendered inoperative by the depreciation of the Japanese currency. The Tariff Board having enquired into the matter supported the statement made by the Indian manufactures and recommended the raising of the duty on non-British cotton

piece goods from $31\frac{1}{2}$ to 50 per cent, and this recommendation was immediately accepted by the Government of India. In 1933, the same factor necessitated the raising of the duty to 75 per cent. The Japanese manufacturers now apprehending a loss of the Indian market put pressure upon the Government of India by boycotting the purchase of Indian raw cotton. Japan is the biggest consumer of Indian raw cotton and the loss of the Japanese market was bound to affect seriously the economic position of the Indian cultivators. Thus, to avoid this tangled situation, the two countries entered into an agreement known as the Indo-Japanese Trade Agreement. The most important terms of the Agreement were: (1) Japan agreed to buy 1,000,000 bales of raw cotton in return for exporting to India 325,000,000 yards of cotton piece goods but could export 400,000,000 yards by buying additional 500,000 cotton bales, and (2) the customs duties to be levied on the Japanese piece goods were not to exceed 50 per cent *ad valorem* or $5\frac{1}{2}$ annas per pound.

Meantime, as a result of the visit of the British Textile Mission to India in the autumn of 1933, an Agreement was concluded between the Bombay Millowners' Association and the Mission on the rates of duties to be levied on British goods. It was agreed that the Indian Cotton Industry is entitled, for its progressive development, to a reasonable measure of protection against the imports of United Kingdom yarn and piece goods. It was also agreed that under present conditions, owing to lower costs and other factors operating in foreign countries, the industry required a higher level of protection against them than against the United Kingdom. It was also agreed that if and when the revenue position of India made it possible for the Government of India to remove the general surcharge on imports, the Indian side would not make fresh proposals with regard to the duties applicable to the United Kingdom. In

the matter of cotton yarns, the duties agreed were 5 per cent *ad valorem* with a minimum specific duty of $1\frac{1}{4}$ annas per pound. In regard to raw cotton, the Indian side strongly emphasised the urgent necessity of further efforts being made in the United Kingdom to popularise and promote the use of the Indian raw material, and this was accepted by the British Mission. The provisions of these two Agreements were given statutory force by the Indian Tariff (Textile Protection) Amendment Act which became law on the 1st May, 1934. When this Act was passed, it was stated by the Commerce Member that the tariff rates on British goods would remain in force for two years in accordance with the terms of the Agreement between the Lancashire Delegation and the Millowners' Association, Bombay.

Before the expiry of the period of two years a special Tariff Board was appointed to examine the level of the duties necessary to afford adequate protection to the Indian cotton textile industry against imports from the United Kingdom. This Board found that in spite of the world-wide economic depression the Indian cotton textile industry had made substantial progress during 1931-35. The Indian mill production of cotton piece goods rose from 2,561 to 3,397 million yards during the period showing an increase of 33 per cent and of yarn from 867 to 1,001 million lbs. showing an increase of 15 per cent. The average total number employed in India's mills in 1935 was 414,884, an increase of 19,000 since 1931. The imports of cotton piece goods from all countries during the same period rose from 882 to 943 million yards, an increase of 7 per cent only but Britain's share of the import trade has been 'almost stationary.

Regarding the levels of duties required to afford adequate protection to cotton piece goods, the Board compared the prices of typical imports from the United Kingdom and of

similar goods produced in India and came to the conclusion that the duty necessary to equalise prices should be 20 per cent *ad valorem*.

We have surveyed the development of Indian industries since the adoption of the policy of protection. It is clear that the Government of India put every industry to the searching examination of the Tariff Board and have kept in view the interests of the producers and the consumers alike. It is true that this policy has entailed a burden upon the consumers but it has not been out of proportion to the progress made. The prices of protected goods have greatly fallen and in many cases the pre-War levels have been attained. The growing internal competition is keeping down prices but signs are not wanting of a tendency towards price agreements to exploit the home market. Therefore, it will be necessary to keep a close eye upon the course of prices, so that the interests of the consumers may not be sacrificed for the benefit of the producers.

CHAPTER XII

THE STATE AND INDUSTRY

The rôle of the State in relation to industrial development has assumed an importance in the current century, that was unknown in the greater part of the nineteenth century. When the East India Company was a pure trading corporation, it was interested in those products of Indian industries that held out prospects of a profitable sale in European markets. But with the acquisition of political power by the Company, its economic policy was profoundly influenced by the policy of Great Britain. The economic policy of Great Britain during the eighteenth century, towards its colonies, was that they were to be the sources of supply of raw materials for British industries and markets for British manufactures. Under this policy, the trade of the East India Company, which mainly exported manufactured goods from India in the eighteenth century, was viewed with jealousy by the vested interests at home. Thus, in their letter to Bengal, dated 17th March, 1769, the Court of Directors desired that the "production of raw silk should be encouraged in Bengal and that of manufactured silk fabrics should be discouraged."¹

Though this was the policy with regard to manufactured goods competing with British products, the Company was

¹ "This letter contains a perfect plan of policy both of compulsion and encouragement which must in a considerable degree operate destructively to the manufactures of Bengal. Its effects must be (so far as it could operate without being eluded) to change the whole phase of the industrial country, in order to render it a field for the produce of crude materials subservient to the manufactures of Great Britain." Ninth Report of the Select Committee of the H. C., 1783.

instructed to encourage the production of those goods for which Great Britain was dependent upon foreign countries. We have seen in previous chapters that the Company interested itself in the production of indigo and raw cotton towards the close of the eighteenth century, with a view to making Great Britain independent of foreign sources of supply of these materials. The introduction of tea cultivation in India was the result of the same economic policy, because Great Britain wanted to be independent of China—then the only country from which its supply was derived.

There was also another reason which induced the Company to keep itself aloof from manufacturing industries. The progress of British industries after the Industrial Revolution was accompanied by the acceptance of the policy of laissez faire under which it was thought that any interference by the State with the economic affairs of a people was injurious in its effects. The British administrators in India were undoubtedly influenced by this doctrine, though they were not strictly consistent in their adherence to it. The production and the manufacture of salt and opium and the cultivation of tea could not, however, be justified by the laissez faire doctrine as advocated at that time. As Pandit Malaviya remarked : “ The doctrines of free trade and laissez faire, an undue regard for English interests and the fear of interference with English trade have prescribed the policy which the Government in India had to pursue.”¹ The economic condition of India under this policy became a source of alarm to thoughtful Indians. During the second half of the nineteenth century there were no less than 24 famines in India and the severity of the distress was attributed to the progressive ruralisation of the country.

¹ Minute of Dissent to the Report of the Indian Industrial Commission, 1916-18, p. 308.

Famine Commission of 1880, and their recommendations.

The Famine Commission of 1880, which was appointed after the disastrous famine of 1877-78, observed : " A main cause of the disastrous consequences of Indian famines, and one of the greatest difficulties in the way of providing relief in an effectual shape, is to be found in the fact that the great mass of the people directly depend on agriculture, and that there is no other industry from which any considerable part of the population derives its support. The failure of the usual rains thus deprives the labouring class not only of the ordinary supplies of food obtainable at prices within their reach, but also of the sole employment by which they can earn the means of procuring it.¹ While recommending various measures to combat famines in India, the Commission expressed the view that " no remedy for present evils can be complete which does not include the introduction of a diversity of occupations through which the surplus population may be drawn from agricultural pursuits and led to find the means of subsistence in manufactures or some such employment." The Commission advocated a radical change in the policy hitherto pursued by the Government in relation to industries and indicated the directions in which Government might usefully aid in fostering the growth of new industries. Government, they thought, might pioneer new industries or introduce the scientific methods of Europe for various manufactures and might afford valuable and legitimate assistance to private persons desiring to embark on a new local industry by obtaining useful information from other countries or skilled workmen at public cost. It was also emphasised by the Commission that Government should encourage local industries by the purchase of their products in preference to imported articles and by the institution of an elaborate system of technical, artistic

¹ The Report of the Indian Famine Commission, 1880, pp. 175-76.

and scientific education which would render available the supply of skilled labour for growing industries. Their general conclusion was : " To whatever extent it is possible, however, the Government should give assistance to the development of industry in a legitimate manner, and without interfering with the free action of the general trading community, it being recognised that every new opening thus created attracts labour which would otherwise be employed to comparatively little purpose on the land, and thus sets up a new bulwark against the total prostration of the labour market, which in the present condition of the population follows on every severe drought."

As a consequence of these recommendations, the first step taken by the Government was an attempt to collect and disseminate commercial and industrial information. The **Early industrial activities.** Calcutta Exhibition of 1884-85 was an expression of this policy. An attempt was also made to examine the industrial resources of India by the Reporter on Economic Products. The position of various existing indigenous industries was examined by officials and their reports were embodied in a series of monographs. The Geological Survey of India began to explore the possibilities of exploitation of the mineral resources of the country.

The second form of State activities in relation to industries was the provision of an imperfect system of technical education. The demand for technical education found its manifestation in the following resolution passed by the Indian National Congress in 1887 : " That having regard to the poverty of the people, it is desirable that the Government be moved to elaborate a system of technical education, suitable to the condition of the country, to encourage indigenous manufactures by a more strict observance of the orders, already existing, in regard to utilising such manufactures for state purposes, and to employ more extensively, than at present,

the skill and talents of the people of the country." This request was reiterated in successive sittings of the Indian National Congress but it failed to produce much impression upon the Government. About the position of technical education in India, Sir John Hewett remarked in 1907 : "The question of technical and industrial education has been before the Government and the public for over twenty years. There is probably no subject on which more has been written and said, while less has been accomplished." ¹

The two provinces in India that took the initiative in adopting a forward policy for the development of industries are Madras and the United Provinces. In 1898 Mr. (now Sir) Alfred Chatterton, who interested himself in the industrial problems of the Presidency of Madras, obtained a small grant from Government for experiments in the manufacture of aluminium vessels in the School of Arts. These experiments were so successful and in the course of a year so much progress was made that the Madras Government proposed that Mr. Chatterton should devote himself to the restoration, organisation and development of those technical trades and industries, especially metal work and connected arts, which appeared most likely to prove successful and that he should pay special attention to the following matters :—

- (1) The development of the aluminium industry.
- (2) The inspection and reorganisation of existing industrial schools and the establishment of new ones.
- (3) The development of indigenous industries; and
- (4) The establishment of a manual training class in the College of Engineering Workshops or elsewhere.²

¹ Speech of Sir John Hewett at the Nainital Industrial Conference, 1907.

² Memorandum of the Department of Industries, Madras Presidency, Appendix J, Report of the Indian Industrial Commission, 1916-18.

These proposals were sanctioned by the Secretary of State, with the observation that "the aluminium industry would be left to private enterprise as soon as success of the industry was assured and the trade would benefit by the methods adopted under Government supervision." In the course of the next four or five years experiments with handloom weaving, with pump irrigation and with chrome tanning were undertaken by Mr. Chatterton. The introduction of chrome tanning was so successful that it led to the establishment of a vigorous industry.

In 1905, the Madras Government submitted a scheme to the Government of India for the further advancement of the industrial development of the Presidency. It was proposed to create a new department to initiate experiments which might assist private enterprise to take up fresh industrial undertakings, to make a survey of existing industries and to investigate the possibility of creating new ones. Lord Morley, then Secretary of State for India, though sceptical about the direction of State effort towards the creation of new industries, sanctioned the creation of the new department by way of experiment, under a Director of Industrial and Technical Enquiries. Thus, the first Provincial Department of Industries came into existence in 1906. The Government of India also having recognised the need for a general industrial policy created a separate Imperial Department of Commerce and Industry in 1905.

In 1907, an Industrial Conference was convened by Sir John Hewett, Lieutenant-Governor of the United Provinces, to formulate proposals for the creation of a Department of Industries with a Board of officials and businessmen "whose main functions were to be the acquisition and dissemination of industrial information, the introduction of new and the stimulation of existing industries." The Conference approved of the proposal for the establishment of a technological

Nainital Industrial
Conference.

institute for research work with a view to bringing scientific knowledge to bear on industrial problems, and recognised the need for financial assistance to private industrialists to pioneer new industries or demonstrate improved methods.

In pursuance of these recommendations, loans or grants were given to several concerns, especially to sugar factories. The Indian Industrial Commission found that this financial assistance, in the absence of a properly considered and accepted policy or of a systematised organisation to give effect to it, produced very little effect upon private capitalists. The Government also started a pioneer oil mill to investigate the possibility of extraction of cotton-seed oil on a commercial scale.

In 1908, an Industrial Conference was called by the Madras Government at Ootacamund to consider the best method of developing further the work which had been begun by the Director of Industrial and Technical Enquiries and also to review the question of the improvement and extension of technical education. This Conference approved of three functions that could be discharged by the Department of Industries : (1) the supply of advice in regard to new industries, and the introduction of new methods and processes, (2) the carrying out of investigations and experiments and (3) the development of selected industries. With regard to the question of pioneering new industries the Conference adopted the resolution that the Government may undertake, as a pioneer, the introduction of new industries or industrial processes for the purpose of training students or apprentices or for demonstrating that such industries will be commercially successful subject to the qualification that Government should withdraw from any such undertaking as soon as the advantage of the improved methods was sufficiently demonstrated. This resolution was, however, adopted under a protest from some European members who held that Govern-

Industrial Confer-
ence at Ootacamund;

ment should confine assistance to commerce to matters of research, technical education, industrial instruction and the dissemination of industrial information. But these beginnings, though modest in character, received a great set-back as the policy underlying them was not approved by the Secretary of State for India.

It has been pointed out that Lord Morley in 1906 expressed doubts as to the value of the efforts made to create industries in Madras, and he now differed fundamentally from the views expressed by the Ootacamund Conference and approved by the Madras Government regarding the functions of a Department of Industries. In his Despatch, dated 20th July, 1910, Lord Morley observed : " I sympathise with the Conference and the Madras Government in their anxiety for the industrial development of the province, but I think that it is more likely to be retarded than promoted by the diversion, to State managed commercial enterprises, of funds which are urgently required for the extension of industrial and technical instruction. The policy which I am prepared to sanction is that State funds may be expended upon familiarising the people with such improvements in the methods of production as modern science and the practice of European countries can suggest ; further than this, the State should not go and it must be left to private enterprise to demonstrate that these improvements can be adopted with commercial advantage. My objections do not extend to the establishment of a bureau of industrial information or to the dissemination from such a centre of intelligence and advice regarding new industries, processes or appliances, provided that nothing is done calculated to interfere with private enterprise." These orders led to the discontinuance of the State activities in industries.

It is to be observed, however, that this decision of Lord Morley was influenced by his undue predilection for laissez

faire doctrines as also by the protests of the European merchants at the Ootacamund Conference. It was unfortunate that he did not lay any stress on the difference between the industrial conditions of India and those prevailing in Europe. The orders of Lord Morley evoked a storm of protest in the country. The Sixth Indian Industrial Conference protested against the abolition of the Department of Industries and the Madras Legislative Council in a resolution pressed for a reconsideration of this decision.

Lord Crew, successor of Lord Morley, in his reply to a representation from the Government of Madras for a reconsideration of his predecessor's policy, while re-affirming Lord Morley's decision against the extension of State activities to trading on commercial lines, pointed out that the Government of Madras appeared to have placed too limited a construction upon the orders of Lord Morley. "The policy which he then sanctioned was that State funds might be expended upon familiarising the people with such improvements in the methods of production as modern science and the practice of European countries could suggest. This need not be interpreted as confining instruction solely to industrial schools. I am prepared to recognise that in certain cases instruction in industrial schools may be insufficient and may require to be supplemented by practical training in workshops when the application of new processes may be demonstrated; and there is no objection to the purchase and maintenance of experimental plant for the purpose of demonstrating the advantages of improved machinery or new processes or for ascertaining the data of production."¹

It is to be greatly deplored, however, that no action had been taken, even within the limited sphere of activity which Lord Morley had sanctioned and Lord Crew

¹ Despatch No. 24, Revenue, dated March 12, 1912.

endowed. The Industrial Commission pointed out that difficulties in the way of giving effect to the policy of Lord Morley were increased by the lack of organisation, but the fact is that the Government did not attempt to create the necessary organisation.

Reference has been made in a previous chapter regarding the effects of the War upon the economic condition of India. The industrial deficiencies of India were brought into prominence by the closure of the European markets for the supply of the essential requirements of Indian industries. Nor was the military position of the country sound owing to the absence of industries capable of supplying the munitions of war. The question of industrial development thus received a new stimulus. Besides, for nearly a decade before the War, Indian public opinion was insistent on a policy of rapid industrialisation. This demand emanated from the educated classes who found increasing competition in the learned professions and sought in industrial development new avenues for employment. Public opinion thus appeared ripe for initiating a forward policy for the development of industries in India by direct State action. But the attitude of the Government of India on this subject was vacillating. Under the stress of war necessities, the Government instituted a general survey of the industrial position of the country, and as a result they became convinced of the necessity for a definite industrial policy for India as a whole. Sir William Clark, then Member for Commerce and Industry, in reply to Sir Ibrahim Rahimtoola's resolution for the appointment of an Industrial Commission, observed that "Government of India have decided that the time has come when the question of the expansion and development of Indian manufactures and industries should be taken up in a more comprehensive manner than has hitherto been attempted. They have

European War and the appointment of the Industrial Commission.

strong hopes, however, that it may prove possible to place the industries of this country on a much firmer and more extended basis than at present, and they consider that no means should be left untried which holds out a reasonable hope of effecting this end." The debates in the Assembly culminated in the appointment of the Indian Industrial Commission in 1916, to whom the following questions were referred :—

(a) Whether new openings for the profitable employment of Indian capital in commerce and industry can be indicated.

(b) Whether and, if so, in what manner, Government can usefully give direct encouragement to industrial development—

(i) by rendering technical advice more freely available ;

(ii) by demonstration of the practical possibility on the commercial scale of particular industries;

(iii) by affording directly or indirectly financial assistance to industrial enterprises ; or

(iv) by any other means which are not incompatible with the existing fiscal policy of the Government of India.

The Commission, after a comprehensive survey of the economic position of India, made important recommendation regarding the development of Indian Industries. Their findings may be summarised as follows : India is a country rich in raw materials and in industrial possibilities, but poor in manufacturing accomplishment. The deficiencies in her industrial system are such as to render her liable to foreign penetration in time of peace and to serious dangers in time of war. Her labour is inefficient, but for this reason capable of vast improvement. She relies almost entirely on foreign sources for foremen and supervisors ; and her intelligentsia have yet to develop a right tradition of industrialism.

Her stores of money lie inert and idle. The necessity of securing the economic safety of the country and the inability of the people to secure it without the co-operation and stimulation of Government impose, therefore, on Government a policy of energetic intervention in industrial affairs. In order to discharge the multifarious activities which this policy demands, Government must be provided with a suitable industrial equipment in the form of Imperial and Provincial departments of industries.

The main activities of Government in respect of industries must relate to (1) research, (2) industrial and technical education, (3) commercial and industrial intelligence, (4) direct assistance, technical and financial, and (5) the purchase of stores. On each of these subjects important recommendations were made. The machinery proposed by the Commission to carry on these functions involved the creation of Central and Provincial departments of industries "manned largely by all-India Scientific and Technical services."

The Provincial Department of Industries should undertake the following functions :—

(a) The direct encouragement of industries, including a large share in industrial research work, the provision of technical advice and assistance to industrialists, the examination of applications for special concessions, and the grants of loans to small and cottage industries.

(b) The collection and distribution of commercial and industrial intelligence ; the work of passing Government indents and of purchasing and inspecting certain classes of Government stores ; the organisation of markets for local products ; the conduct of special enquiries and industrial surveys ; the holding of industrial exhibitions and the management of commercial and industrial museums.

(c) The control of technical and industrial education.

(d) The control of the staff employed for the local administration of Electricity, Factories and Boiler Acts ; and the furnishing of advice to Government on the industrial and commercial aspects of the Mines Act and of the rules for mining leases and prospecting licenses.

The Provincial Department of Industries is to work under the control of a Director of Industries assisted by a provincial Board of Industries, the members of which should be appointed by Government, in some cases on its own selection, in others on nomination by suitable public bodies.

The Central Department of Industries⁵ will have to deal with certain industrial problems of importance common to more than one part of India. "It is thus," says the Commission, "a most important duty of the Government of India to provide the machinery required to ensure the uniform development that alone will make the country self-contained, both economically and for purposes of defence." The Central Department of Industries should, therefore, be entrusted with the direction and co-ordination of the general industrial policy of the country and the proper performance of certain functions of national importance. The various subjects which this Department would control fall into three groups :—

(1) Geology and Minerals, Salt, Explosives and Petroleum. The chemical service and chemical research, Government factories for research and demonstration.

(2) Stationery and Printing, Commercial and Industrial Intelligence, Stores, Factories Act. The General encouragement of industries, Technical, and Industrial education.

(3) Inventions and Designs, Steam Boiler Acts, Electricity, Ordnance Factories, Inspection of Ordnance manufactures.

The Central Department of Industries is to be in charge of a member of the Viceroy's Executive Council assisted by a Board of three members who will have under their charge each of the three groups of subjects mentioned above.

Following the recommendations of the Commission, the first step taken was the conversion of the Indian Munitions Board which was established in 1917 "to control and develop Indian resources, with special reference to the needs created by the war" into the Central Department of Industries. The control which this Board exercised in the matter of purchase of Government stores was highly important from the point of view of the industrialists as they had a direct influence on the development of indigenous industries. As a matter of fact the work of this Board was a "practical anticipation of many of the conclusions" forced upon the Commission.

The Provincial Governments also appointed Directors of Industries and thus a nucleus was formed to give effect to the recommendations of the Commission.*

The most important recommendation of the Commission was the creation of an all-India Scientific Service and a Chemical Service to direct research work. Government following this recommendation appointed a Committee to consider whether an all-India Chemical Service was the best method of attaining the ends which the Industrial Commission had in view. The majority of the Committee agreed that a Chemical Service should be established having as its primary object "the encouragement of industrial research and development." Sir P. C. Ray, who was opposed to the creation of the Chemical Service, wrote: "I consider that the days of Government services are over and that the development of industries by the agency of a Government service is not the most suitable way of dealing with the problem."¹

¹ The Clow—State and Industry,, p. 16.

Professor Ray, however, was probably under an apprehension that as, this Service would mainly be manned by foreign chemists, the best interests of the country would not be served.

The introduction of the reformed Constitution in India raised important issues as to the authority most suitable for the development of industries. The recommendations of the Industrial Commission were based on the conception of a unitary form of Government under which the general policy for the control and direction of industrial activities was to rest with the Central Government. The Commission thought that even with the changes proposed by the Montagu-Chelmsford Report there was no need to modify the machinery proposed by them. But, it is worthy of note that the Commission could not anticipate the difficulties that would arise from the acceptance of the new Constitution in regard to the execution of the new policy. As Sir Charles Innes pointed out : " The Commission was concerned solely with India's industrial deficiencies, and deliberately it set itself to devise the most efficient way of remedying those deficiencies. The reform scheme, on the other hand, of set purpose is prepared to sacrifice efficiency to other and wider considerations."

Under the reformed Constitution the "development of arts and crafts and local industries" became a Provincial subject, and Indian opinion insisted that this subject should be under a minister. Their argument was that the subject was one in which public opinion was keenly interested and it was believed that if a big advance was to be made, ministers depending on the support of the Legislatures were likely to show more enthusiasm and secure more support than the Government of India or the reserved side of Local Governments.

The Functions Committee in their report on the allocation of subjects between Central and Provincial Governments

pointed out that it was difficult to maintain any dividing line between 'local' and other industries and recommended that the "development of industries including industrial research and technical education" should be a Provincial subject and be dealt with on the transferred side of the Government in all provinces, but "Central institutions of scientific and industrial research and the control of mineral development" were to be all-India subjects.

The Government of India were, however, opposed to the transference of industries to the control of Provincial Governments. In their despatch, dated 16th April, 1919, they put forward three reasons which induced them to hold that the Central Government could not divest itself of responsibility for the industrial progress of the country which was necessary to secure its military safety and its social and political stability. The Government of India are in control of such subjects as tariffs, railways and foreign trade relations, the influence of which on industrial development is profound. Secondly, the Provincial Governments on account of their slender resources, will not be able to undertake costly experiments or finance enterprises by loans, guarantees or undertakings to purchase products. Thirdly, experiments on a commercial scale will have to be made "if dangerous gaps in our economic armour are to be closed, and essential links in the industrial chain are to be forged" and this can be done by the Central authority only.

But the respective spheres of influence of Central and Provincial Governments were stated by the Functions Committee as follows: "The intention of the Committee was to entrust the Provinces with sufficient power to secure development of their own industries, while giving the Government of India full scope in matters which could not be dealt with by individual Provinces." Thus, though a Central Department was created, the main responsibility for the

development of industries by official agency passed to the Local Governments under their ministers.

The change of industrial policy as recommended by the Industrial Commission and accepted by the Secretary of State for India showed considerable promise in the beginning. The

Industrial progress
under the Reformed
Constitution.

Central Government with a view to evolving a common policy and a uniform programme began to convene conferences of Directors and Ministers of Industries so that the provinces might benefit by mutual exchange of views. They further desired to build up the necessary organisation by the creation of the all-India Industrial and Scientific services but this proposal was opposed by the Provincial Governments. The idea of the Central Government was that the Provincial Governments would utilise the services of experts recruited by the Central Government. The Provincial Governments did not favour the idea of utilising the services of an agency over which the ministers would not be able to exercise the necessary control. The necessary agency was not accordingly created. The functions of the Central Government were thus restricted to the collection and dissemination of industrial information and the purchase of stores. The Provincial Governments, however, drew up elaborate programmes of development and research and attempted to build up the necessary organisation to carry on their work. But the activities of both the Central and Provincial Governments were seriously affected by two new factors. The world-wide depression in industries from which India could not escape made the prospects of development gloomier as every year rolled by. Further, the financial difficulties of both the Central and Provincial Governments largely crippled the activities which were initiated with considerable enthusiasm. But in spite of these difficulties some amount of solid work has been done in different directions.

It is recognised that the development of industries in a country depends to a large extent upon the expansion of local and foreign markets. With this end in view, the Department of Commercial Intelligence was established, but up to 1921 its activities were confined mainly to overseas trade. Since 1922 the Department undertook to supply information relating to inter-provincial trade. Its main functions are to answer trade inquiries, to keep Government in touch with commercial opinion, to assist Indian firms to establish or to extend trade relations with foreign traders and to collect and publish statistics. An Indian Trade Commissioner has been appointed in London to "foster and assist the export trade of India." But the need for the appointment of Trade Commissioners is greater on the Continent and in other unexplored markets than in London.

The Central Government began to issue bulletins on industrial matters and publish a Journal of Indian Industries and Labour, but these have been discontinued as a consequence of a policy of retrenchment. The Labour Gazette, published by the Bombay Labour office, devotes to labour affairs and also devotes some attention to commercial matters.

The Provincial Governments have carried on systematic surveying of arts, crafts and cottage industries with a view to gathering preliminary information regarding their organisation and scope for development.¹ The industry that has most attracted the attention of the Provincial Governments is the handloom industry for this industry, even now plays a very

¹ In 1928 a survey was conducted in Bengal regarding the position of cottage industries and the results embodied in a Report on the survey of cottage industries. The United Provinces and Madras have also conducted similar surveys.

important part in the economic life of the country.¹ The relative position of the handloom industry did not deteriorate during the first quarter of the current century. On the other hand, the total production by handlooms increased from 880 million yards in 1899-1900 to 1,160 million yards in 1925-26.² During the War period the industry received a substantial stimulus from the prevailing high range of prices of cotton goods. During the post-War period, however, it received another stimulus from the political movement that stressed the use of handwoven cotton goods. It is recognised that under suitable conditions and within certain limits, the handloom industry can still hold its position against mills. The success of this industry depends more on commercial factors than on dexterity. The use of best appliances, attention to suitable designs and facilities for marketing can still maintain the vitality of the industry.

The chief problem which the Department of Industries had to tackle was how to train the handloom weavers. This training is being imparted not simply by means of fixed weaving schools but also by peripatetic schools and demonstration parties. Besides schools, extensive use has been made of exhibitions to demonstrate the advantages of improved methods. One of the results of the activities of the Department of Industries has been the general adoption of fly-shuttle in place of the hand-thrown shuttle, which increased production by 40 to 100 per cent. Efforts are being made in various provinces to introduce dobbies for the production of cloth with pattern borders. Thus, in

¹ According to the Census Report of 1921 there are 19,38,072 handlooms in India. These are distributed as follows :—

Assam	...	4,21,367	Madras	...	1,69,408
Bengal	...	2,12,886	Burma	...	4,79,687
Bihar & Orissa	...	1,64,592	Punjab	...	2,70,507

² Report of the Tariff Board on Cotton Industry, p. 239.

the Central Provinces, between 1920 and 1926, 10,000 dobbies had been supplied to weavers.

The industries connected with the handloom industry, as for example, dyeing and printing, have received some amount of attention. Thus, in the Punjab an institution was established at Shahdara for experiments in dyeing and printing. In Bombay demonstration parties are sent to interest the weavers in dyeing and calico printing.

The silk industry has received some amount of attention from the Department of Industries. A silk institute has been established at Bhagalpur in Bihar for the improvement of designs and methods of manufactures. The designs after being produced in the Institute are taken by the weavers in the bazaar. In Bengal a silk institute has been established at Berhampore with the same object. The problem of marketing the products of cottage industries is also receiving the attention of the Government. In the majority of provinces depots have been opened for the sale of goods made by cottage workers. The United Provinces have appointed agents in London for the sale of goods of this kind.

The question of granting adequate financial assistance to middle class industrialists received careful consideration at the hands of the Industrial Commission. It is difficult for them to inspire the confidence of the investing class, nor can they offer adequate security to satisfy banks. While recommending a scheme of industrial banks to deal with the problem of finance ultimately, the Commission recommended that Government might give guarantees of credit, guarantees of dividends, loans and contributions to share capital.

Three provinces up to the end of 1927 have made legislative provision for the grant of financial assistance to industries. The province of Madras took the initiative in passing an Act known as the State Aid to Industries Act of 1923. Financial assistance under the Act may include

"loans, guarantees of credit, subsidies, subscriptions to shares or debentures, guarantees of dividends and grants on favourable terms of land or materials belonging to Government." It is to be granted to new or nascent industries, or industries to be newly introduced in areas where such industries are undeveloped and to cottage industries, on the advice of a Statutory Board of Industries. Control is exercised either by the appointment of Government Directors or by restrictions by rules. Under this Act only seven applicants were granted loans of varying amounts. With regard to the operation of this Act the Industries Department in Madras observes that "while the results cannot be said to have fulfilled expectations, the period during which the Act has been in force has been too short to justify a definite expression of opinion as to whether the Act is likely to realise its object of accelerating the industrial development of the Presidency."¹ In the same year the Government of Bihar and Orissa passed an Act closely following the Madras Act, and the Punjab Government passed an Act with limited scope, known as the Punjab Industrial Loans Act.

In Bihar and Orissa the Act of 1923 contained a number of provisions relating to the supply of machinery on the hire-purchase system. Under this Act a number of loans were made to several concerns but the results do not appear encouraging. In the Punjab the Act has been sparingly used and it is only in 1926-27 that six applicants received loans of Rs. 5,000 each.

In the United Provinces, even before the introduction of the Reforms, financial assistance was given to a number of concerns but the prospects there did not appear to be hopeful. In 1921-22 the question of establishing an industrial bank was examined by a Committee who decided

¹ Clow—The State and Industry, p. 106.

against the establishment of such a bank but recommended the appointment of a Board of Industrial Loan Commissioners. In 1922 a Board of this type was established whose functions are advisory and the responsibility for granting loans rests with the Government. The United Provinces Government not merely give loans but distribute money in the form of grants. Between 1921-27 a sum of Rs. 1,29,000 was distributed in the form of grants to encourage the establishment of new factories.

It is difficult to prophesy to what extent the new policy will be attended with success. But judged by the experience of the past few years the future of this policy does not appear to be hopeful. There is, however, one extenuating circumstance, *viz.*, the policy of industrial development by the State commenced at a period which synchronised with a general depression of industries, and when this factor is removed the new policy may have more reliable data to work on.

The question of the provision of technical and industrial education was discussed by the

Technical education.

Industrial Commission in all its bearings.

There is no doubt that technical education has played an important part in Western Countries in the provision of trained men for the varied needs of industries. But, it must be recognised that technical education alone cannot create new industries. The success of technical education in any country must depend on a close co-operation between the existing industrialists and the educational institutions. In India one great obstacle to the growth of technical education has been the lack of co-operation between the employers of labour and educational institutions supplying technically trained labour. As the Industrial Commission have pointed out, "Except in Bombay, the introduction of modern methods was mainly confined to European community and the opportunities for gaining experience were not easy for Indians to

come by."¹ Earlier attempts in this direction were consequently conspicuous by their failure. Where there were prospects of suitable employment, technical education proved a success as in the case of the Victoria Jubilee Technical Institute in Bombay.

The increasing interest shown by Indians in the current century in the development of industries has brought the question of technical education to the forefront. The Industrial Commission recognised the need for an elaborate system of technical training to meet the varied demands of the country. They recommended that the existing Engineering Colleges should make provision for the higher technical instruction of mechanical and electrical engineers and technological chemists. They also foreshadowed the need for two colleges of the highest type—one to cover every branch of engineering designed to impart specialised training and the other to be devoted mainly to metallurgy and mineral development. They also recommended a number of measures for the improvement of industrial education.

Since the adoption of the new policy a great impetus has been given to promote technical education. Two new Engineering colleges have been established—one at Lahore and the other at Patna. The former has been established to provide training in Mechanical and Electrical Engineering in conjunction with practical training in the workshops of the North-Western Railway, and the latter trains mainly Civil Engineers.

A Technological Institute was established at Cawnpore in 1920. The original intention was that the Institute should be an institute of research in chemical industries. But in 1921, on the advice of an expert Committee, courses were opened in general chemical research in vegetable oils and leather. The

Specialised Institutions.

¹ Report of the Indian Industrial Commission, p. 101.

pupils trained by this Institute have been mostly absorbed by European firms, and the students have in some cases been given posts formerly held by trained Europeans. The Indian School of Mines at Dhanbad was opened in 1926 to act as a training ground for Mining Engineers and Geologists: Specialised technological training of an advanced character is given in the Bengal Tanning Institute where the subjects taught include the principles of leather manufacture and analytical chemistry as applied to the manufacture of leather.

The growth of iron and steel industry has been followed by the establishment of a Technical Institute at Jamshedpur by the Tata Iron and Steel Company in co-operation with the Government of Bihar and Orissa. The institution provides a sound theoretical training in metallurgy combined with a thorough practical training in the iron and steel works of the Company.

The Indian Industrial Commission laid considerable stress upon scientific research for the exploitation of the natural resources of the country and for solving the chemical and industrial problems arising out of the processes of manufacture. As a matter of fact, no State activity in the direction of development of industries commends to the public so much as the conduct of research, for the results of research may not immediately be of commercial value, and it may take years before a new discovery can be commercially exploited.

In the matter of industrial research, the attention of the Government was attracted to the possibility of exploitation of forest products. A Research Institute was established at Dehra Dun in 1906, by the Government of India. With regard to the activities of the Institute, the Government of India observed: "Results of practical value are, of necessity, slow of attainment in dealing with forest crops; nevertheless, a substantial foundation has been laid and creditable results have been obtained both in the scientific and applied

branches.''¹ In addition to branches dealing with sylviculture, chemistry, botany and entomology, 'it contains an economic branch specially devoted to research in industries dependent on forest produce. The work on timber testing, seasoning, wood preservation and paper pulp has a direct bearing on industries. The activity of the Institute resulted in the exploitation of bamboo as a paper making material. Experiments have also been carried out in the examination of the utility of numerous woods for various manufactured articles, with the result that many Indian woods have now been given enhanced industrial value.

Among the provincial institutes of research reference has already been made to the Cawnpore Technological Institute and the Bengal Tanning Institute. In the former, as Mr. Clow says, "Investigations have been made in connection with the constituents of Indian turpentine, the possibility of obtaining soda from alkaline soils, the manufacture of strychnine and brucine, the utilisation of local essential oils and the manufacture of portland cement." In the latter Institute a large number of practical tanning experiments have resulted in the improvement of existing processes and the introduction of new methods. In Bengal a number of investigations have been made in connection with the match industry, glue, sugar, lac and glass. All provinces did not display the same zeal for research as in the case of the United Provinces and Bengal. But research work is a beginning and much still remains to be done before the industrialists can be benefited by its results.

In connection with some industries special legislation had to be passed with a view to securing funds for research. The Indigo Cess Act, 1918, provided a sum of Rs. 40,000 annually which was made available for technical research.

¹ Despatch of the Government of India, dated the 12th December, 1919.

Though valuable results were secured, the fall in the price of imported dyes has hampered the utilisation of these results and the industry is in a decadent condition. The Act was repealed in 1923. The Indian Cotton Cess Act of 1923 provided for the imposition of a tax of 2 as. per bale on all cotton exported from India or consumed in Indian mills. The object of this Act was to provide the Indian Central Cotton Committee with funds for promoting agricultural and technological research in the interests of the cotton industry. The activities of this Committee have resulted in the evolution and spread of two superior varieties of cotton. Though much of the work of the Committee is agricultural in character, a good deal is being done from an industrial point of view. In their spinning laboratory in Bombay accurate spinning tests are carried on with different varieties of Indian cotton.

A similar Act was passed in the case of Indian lac in 1921. Though India possesses a practical monopoly in the production of lac, the industry was subjected to violent fluctuations during the War period. The industry is encrusted with local prejudice and handicapped by unscientific methods.¹ As the industry was exposed to the danger of a synthetic substitute, Government recognised that researches should be carried on for improved methods of manufacture. In accordance with this policy the proceeds of an export duty on lac are placed at the disposal of the Indian Lac Association which has set up an experimental plantation at Ranchi and erected a Lac Research Institute there.

The patronage by the State of the manufactures of a country is one of the recognised methods for encouraging industries. In India the arts, crafts and cottage industries owed their vitality in no

¹ Introduction to the Report on Lac and Shellac by Messrs. Lindsay and Harlow, 1921.

small measure to the patronage of the Court. We can instance the cases of the Muslin and the Carpet industry which flourished largely due to the encouragement of the Court. But, with the advent of the British rule, there appeared a radical change in this policy. The East India Company began to procure its supplies for civil and military requirements by indents on the Home Office. This policy came under review now and then. Thus, during the Sepoy Mutiny, great difficulties were experienced in procuring military supplies on account of irregular freights and attempts were made in subsequent years to procure supplies locally. But, with the gradual fading of the memory of the Mutiny and the regularity of shipping after the opening of the Suez canal, all attempts with minor exceptions, to procure supplies locally, were given up.

In the meantime, the expansion of public works and the construction of railways by the State in India necessitated a great increase in the demand for materials from Great Britain and the manufacturers of the latter country found the Government of India an important and valuable customer.

The Famine Commission of 1880, as we have noticed before, suggested the purchase of Indian manufactures in preference to imported articles, with a view to giving encouragement to local industries. But this policy the Government of India were not able to put into effect. The Stores Purchase Committee, having surveyed the stores purchase policy of the Government of India from the year 1862 onwards, drew two prominent conclusions :—

(1) That the Government of India have not been generally successful in the efforts made by them, from time to time, to procure relaxations of the Stores Rules, in respect of the encouragement of the local industries and of the local purchase of imported stores.

(2) That the failure has been contributed to largely by

the influence of the Stores Department of, and the consulting Engineers to, the India Office.

The Indian Industrial Commission observed : " It is true that the rules regarding the purchase of stores have been amended from time to time in the direction of local purchase, and it was not so much the prescriptions themselves which were the subject of complaint, as the way in which they have been administered." ¹ They, further, pointed out that the Indian Munitions Board scrutinising the indents on the Stores Department of the India Office found numerous instances in which articles were ordered from England which could have been supplied by Indian manufacturers equally well in respect of price and quality, if the latter could have relied on an established Government practice of local purchase. They, consequently, recommended the adoption of a more liberal policy in regard to the purchase by the public departments of such articles as are or can be manufactured in the country with a view to stimulating industrial progress.

With regard to the organisation to be set up for the purchase of stores, the recommendation of the Industrial Commission was that a Stores Purchase Committee should be appointed to enquire into the appropriate organisation and the rules to be followed to secure the desired end.

The Stores Purchase Committee that was appointed in 1919 declared that the Secretary of State should delegate to the Government of India full control over the details of the Stores Rules. Complete freedom should be granted to India in this matter ; and it should be accepted as a policy, not only in theory but also in practice, that all stores required for the public service should be obtained in India whenever they are procurable in the local market of suitable quality and reasonable price, preference being given to

¹ Report of the Indian Industrial Commission, p. 148.

articles of Indian origin. For this end they recommended the creation of an Indian Stores Department for the purchase and inspection of stores in India. The absence of a central organisation in India possessed of a comprehensive knowledge of the existing resources was a great handicap even when Government wanted to purchase goods of Indian origin. The result was that the officers were induced to adopt the line of least resistance and to obtain stores of extraneous origin when, with better facilities, they might obtain instead suitable goods of Indian manufacture. The Committee expressed the view that this reacted prejudicially on the development of Indian industries, and on the economy and convenience of the public service.

In the preamble to the rules drafted by the Committee to regulate the purchase of stores, is laid down the general policy. It states that the policy of the Government of India should be to make its purchases of stores for the public service in such a way as to encourage the industries of the country, so far as is consistent with economy and efficiency. While emphasising this general policy, the Committee advocated that Government should give Indian industries practical encouragement by the adoption of the following measures :—

- (i) guarantee of orders for a limited period,
- (ii) placing of orders at favourable rates for a limited period,
- (iii) favourable railway rates,
- (iv) revision of the fiscal policy of Government with a view to the protection of local industries,
- (v) adoption of a conventional rate of exchange in effecting comparison between prices quoted for indigenous and imported goods of the same class.

The Committee further pointed out that Local Governments should, in future, be free to deal with purchases of

stores of indigenous origin or local manufacture for their own requirements and they should not be bound to utilise the agency of the Central Government.

Among the numerous rules drafted by the Committee

Rules for the purchase of Stores : the first two deserve our attention :

Rule 1. All articles which are produced in India in the form of raw material or are manufactured in India from materials produced in India, should, in preference to articles not manufactured in India, or wholly or partly manufactured in India from imported materials, be purchased locally, provided that the quality is sufficiently good for the purpose and the price not unfavourable.

Rule 2. All articles wholly or partly manufactured in India should, in preference to articles not manufactured in India, be purchased in India, subject to the following conditions :—

(a) That a substantial part of the process of manufacture of the articles purchased has been performed in India

(b) That the price is as low as that at which articles of similar quality can be obtained through the Stores Department, London.

(c) That the materials employed are subjected to such inspection and tests as may be prescribed by the Government of India.

In their despatch to Provincial Governments the Government of India wrote that they approved most of the recommendations of the Stores Purchase Committee for the encouragement of indigenous manufactures, with the exception of favourable railway rates. With regard to the granting of favourable price for the local products the Government of India pointed out that the Local Governments would be free to pay whatever price they thought proper, but there were obvious dangers attending the use of this power. "The working of the Stores Department, whether Imperial

or Provincial," they observed, "should be governed strictly by business standards both as regards price and quality, and any departure from these standards may lead, not only to extravagance or possible corruption, but to the grant of support to a provincial manufacture to the detriment of a similar industry in an adjoining province."¹ They further pointed out that, in their view, "if it is desired to encourage an indigenous industry by any form of purchase on favourable terms, this should be by way of an openly declared bounty applicable to the whole country and the entire production of the industry wherever it exists, not by the payment of a bonus only on the articles consumed by the Government." Before the rules regarding the purchase of Stores of India were finally adopted, the policy of the Government in respect of the purchase of railway materials was subjected to considerable criticism. In his evidence before the Acworth Committee the High Commissioner of India, in reply to a question relating to the preference of British goods, made the following statement :

"You have got the Indian opinion demanding, from their point of view quite reasonable, that you should purchase absolutely in the cheapest market. I have had a good deal to do with British firms and companies. I have always taken up the position that it is not the business of Indian tax-payer to subsidise British industries or British labour, but that, within certain limits, one might give a bit of a preference, especially to people who have formerly dealt with us. The general principle I have laid down is that if the lowest British tender is within 10 per cent., say, of the German or Belgian tender, I would accept the British tender. I also adopt the principle on occasion that if the lowest German tender, say, is considerably lower than the lowest British tender, I communicate confidentially the terms of the

¹ Despatch, dated the 29th March, 1921.

German tender to the Britisher, and ask him if he will come down."

This preference for British goods at the expense of the Indian tax-payer aroused a feeling of resentment in India which found its manifestation in the adoption of a resolution by the Legislative Assembly: "That the High Commissioner for India in London should be instructed by the Government of India to buy ordinarily the stores required for India in the cheapest market consistently with quality and delivery, and every case, when this rule has not been followed, should be communicated to the Government of India with full reasons, for the information of the Legislative Assembly."¹ The Government accepted this resolution and communicated to the High Commissioner that they had arrived at the conclusion that "all temporary expedients designed to meet an abnormal and transitory state of affairs should now be abandoned, and that the Stores Department in placing contracts for stores and materials required for Government Departments in India should revert to the ordinary business principles of accepting the lowest satisfactory tender."² Shortly after this Despatch the Government of India accepted the recommendation of the Acworth Committee to allot Rs. 150 crores of capital expenditure for the rehabilitation of railways. This decision brought again the question of stores purchase to the forefront, and public feeling in India was that a considerable portion of this sum should be spent in India. Sir Vithaldas Thackersay moved a resolution for the appointment of a Committee to report on the steps to be taken by the Government of India to encourage the establishment of necessary industries so that "as large an amount as possible of Rs. 150 crores to be set aside for railways be spent in India." But owing to a very serious

¹ This resolution was moved by Sir Vithaldas Thackersay in 1921.

² Despatch to the High Commissioner, dated the 25th January, 1922.

depression in the iron and steel industry throughout the world it was difficult for the Government to give substantial effect to this resolution. But, nevertheless, there manifested a desire on the part of the Government to purchase some of the railway materials such as rails, fish plates and wagons from Indian manufacturers provided they were offered at competitive rates.

With the creation of the Indian Stores Department a beginning has been made in the purchase of Stores in India as will be seen from the following figures :

Year.	Purchases (Lakhs of Rupees.)
1922-23	165
1923-24	167
1924-25	259
1925-26	267
1926-27	390
1927-28	378

But the purchase of indigenous products on Government account is yet insignificant and Indian industrialists insist on a greater use of Indian products for State requirements, if Indian industries are to be encouraged. It is to be observed that those in charge of administration are yet to be convinced of the benefit they can confer upon Indian industries by this method.

We have surveyed the activities of the State in relation to industries. Though much can be done by Government, yet the general responsibility for industrial development must ultimately depend upon the people of the country, and their enterprise, initiative and business management. Government in many cases can remove obstacles but it is for the people

to take full advantage of the resources that exist in the country. The development of industries has hitherto been slow and inadequate, and it is upon the effective utilisation of the natural resources of the country with the aid of the mechanical inventions and methods of production of the West that the future prosperity of the country will depend. •

INDEX

Accidents in factories, 249

Act of 1886, 338

.. 1859, 338

.. 1875, 344

.. 1891, 354

Acworth Committee, Report of, 301, 305

Agricultural Commission, Report of, 81

Agricultural Research Institute, Pusa, 87, 91

Artisans—Economic condition of, 39-35

Artistic industries, 14, 15, 31

Assam Labour Enquiry Committee, 60

Assisted Companies, 296

Baines, 4, 6, 23

Ball—Economic Geology of India, 96, 98, 109

Baring E. on railway construction, 295

Bengal Iron Company, 118

Berlin Conference, 226

Berne Conference, 233

Bernier, 7

Birbhum Iron Works Company, 117

Bose, P. N., 118

Bounty on Steel, 379

Bounty Act of 1925, 384

Bracken, Evidence of, 21

Branch and feeder lines, 299

British Trade Disputes Act of 1906, 261

Buchanan, Francis, 4, 6, 23

Calico Printing, 11

Campbell, Note on Tea planting in Assam, 53

Canadian Trade Disputes Act of 1909, 269

Canning, Lord, objections to Guarantee system, 283

Capital, Tea Industry, 63

.. Foreign, 372

Carnegie, Rectorial Address 67

Chamber of Commerce, Manchester, 207, 342, 343

Chamber of Commerce, Bengal, 215, 247, 343

Chamber of Commerce, Dundee, 215

Chamber of Commerce, Bombay, 347

Chatterjee, A.C. Notes on the Industries of U. P., 81

Chatterton, Sir Alfred, 147, 148

Chemical Industries, 156, 157

Chrome tanning Introduction of, 150

Clark, the Hon'ble Mr. on railway rates, 811

Civil War, American, 196

Coal Fields Committee, 104

Coal Mining Company, First formed, 103

Coal Committee of 1924, 101

.. Consumption per capita, 125

.. Depression in the Industry, 111

.. Production of, 109

.. Resources, estimate of, 107

Colvin, The Hon'ble Mr. on supply of labour, 113, 114

Committee of Engineers, 275

.. of 1878, on East Indian Loans, 292

Conferences of Directors of Industries, 1920-239

Contribution from railways, 306

Cotton, Central Committee, 79

Cotton, American Embargo on exports, 71

Cotton, Expansion of cultivation, 77-78

Cotton, Experiments with foreign seeds, 72-77

Cotton, Raw, 68

Cotton industry—Comparative development, 134, 135

.. Depression in, 136

.. Effects of the European war on, 33

.. Growth, 1854-1900, 130

.. 1900-1931, 131

.. Localisation of, 130

.. Scope for expansion, 137

Countervailing import duty on sugar, 361

Curzon, Lord, 230, 245

Customs, Land, 320

.. Sea, 330

.. Committee of 1899, 330

.. Despatch of 1846, Re: customs, 336

Dalhousie, Lord, 106

.. Minute on Railways, 277

Daver, C. N., 127

Deputation from Lancashire, 346

Dewan of Bengal, 319

Discrimination in favour of British ship-building, 381

Discriminating Protection, 370, 371

Dobbs, 97

Dundas, Robert, 3, 22

Durant, Evidence of, 9

Dyeing industry, 9

Dwarkanadas, Mr. J., Resolution on fiscal policy, 373

East India Company, 3, 6, 8, 17

East Indian Railway, 277, 292

Economic condition of factory labour, 186, 190

- Edgar, Report on Tea cultivation, 48, 53
 Ellenborough, Lord, on abolition of inland duties, 327
 Employers' Liability Act of 1880, 247
 Emigration of labour to Assam, 54
 Engineering industry, 390
 Excise duties, 351
 Excise duty on cotton yarns, 356-357
 .. cotton piece goods, 360
 .. Repeal of, 395-397
 Export duties, 351
 Factory Commission of 1875, 199
 .. 1884, 204
 .. 1890, 211
 .. 1907, 167, 221
 Factory Acts, Act of 1861, 20
 .. 1891, 214, 215
 .. 1911, 222
 .. 1922, 242
 Factory labour, Growth of, 165, 166
 Character and composition of labour, 166-167
 Efficiency of labour, 173-78
 Factory laws, Indian and British compared, 209
 First factory bill, Select Committee on the 201
 Famine Commission of, 1876-80
 Report, 293
 Famine and railway construction, 293
 Fawcett on Dyes and Dyeing, 34
 Fee Simple Rules of 1861, 50
 Financial Results of railways, 30
 Fiscal autonomy, 361
 Fiscal Commission, Indian, 309, 360
 Fiscal Policy in the nineteenth century, 318
 Ghosh, Dr. Rashbehari on cotton duties, 355
 Girini Kamgar Mahamandul, 192
 G. I. P. Railway, 277
 Grand Trunk Road, 273
 Grant, Sir Peter—objection to Guarantee System, 288
 State construction of railways, 288
 Guarantee System, 280
 Gupta, J. N., 34
 Gur, 153-54
 Handloom weavers, sufferings of, 26
 Hardinge, Lord, Minute on railways, 276
 Hardwicke, Major General on discovery of coal, 101
 Hastings, Marquis of, on coal, 102
 Heath, J. M., re Iron works, 116
 Heatly, re Coal, 99
 Hides, Tanned, 149
 Holder on Indian dyes, 11
 Holt, Mackenzie, memorandum on Inland duties, 326
 Hope, 345
 Housing of labour, 178, 183
 Industrial Commission, Report of, 1, 44, 88, 163, 309, 311
 Industrial Courts Act, 1919, 267
 Industrial Depression, 375
 Industrial Disputes Committee of Bombay, 192
 Industrial Revolution, 17, 23, 94, 127
 Infantile Mortality, 182
 Innes, Sir Charles, 245, 246, 249, 380
 Inter-Allied Labour Conference, 233
 Imperial preference for steel, 398-99
 Import duty on cotton goods, 355
 Iron ore—Estimate of, 120
 Export of, 121
 Production of, 121
 Iron and Steel Industry, 95, 114
 Jaipur, re calico printing, 10
 Joint Select Committee on the Government of India Bill, 1919, 365
 Jones—Report on coal, 102
 Jute, Experiments in, 83
 Raw, 79
 Substitute for, 84
 Trade in, 82
 Variation in area and outturn, 81
 Jute Industry, 138
 .. Mills founded in Calcutta, 140
 .. Depression during 1875-1882, 141
 .. Development of, 141
 .. Export of jute manufactures, 143
 Kashmiri shawls, 12
 Labour, Report of the Royal Commission, 61, 62, 188, 243
 Lalbhai, Mr. Kasturbhai, Resolution on the repeal of the Cotton Excise, 397
 Lallubhai Samaldas, the Hon'ble Mr. on Fiscal Autonomy, 366
 Laing, S. Objection to the Guarantee system, 28
 On Free Trade, 341
 Larkin, 24
 Latiff, Industrial Punjab, 34
 Law, Sir Edward, 44
 Lawrence, Lord, Minute on Railways, 288
 Leather Industry, 147
 Lefroy, Maxwell, Report on Silk, 28
 Legislative restriction of the hours of adult male labour, 220
 Lords Committee, 1830, 9
 Mac Gregor, 23
 Mac Waters, 147, 269
 Machinery Textile, 138
 Mackay Committee, 303
 Manganese, 124
 Management of Indian Railways, 312
 Martin, History of Eastern India, 8
 Mazdoor Sabha, Cawnpore, 193
 Mica, 123
 Migratory habits of Indian labour, 171
 Military Board, 101
 Millburn, 65
 Mines Act, Indian, 1901, 228
 .. 1923, 244

- Mining Board, 230-231
 Labour, 225
 Minto, Earl of, 101
 Monographs on Cotton Fabrics of Bengal, 33
 Madras, 27
 " Silk Fabrics of the Punjab, 39
 Montagu Chelmsford Report on Fiscal
 Policy, 365
 Moreland, 37
 Motor Transport, 315
 Motte and Farquhar, re Iron Industry, 115
 Muir, Sir William, on Indian Customs
 duties, 345, 352
 Murray, Sir Alexander, re Indian Labour
 Legislation, 251
 Muslims, 45

 North of India Kumbon Iron Works
 Company, 117
 Northcott, Sir Stafford Views on Railways,
 287.

 Oil seeds, 89
 " Experiments in, 91
 " Export of, 89
 " Industrial uses, 89
 Oldham, Dr. re Iron Works, 116
 Organisation of Industries, 17-18

 Paper Industry, 154-159
 " Protection of, 393
 Papers relating to the East India Com-
 pany's Charter, 3.
 " Tea Cultivation 45
 Petit, Sir Dinshaw, re Cotton Mills, 128
 Philips, Mr Justice re Breach Contract, 257
 Pigeon—On Protection, 37-1
 Policy of Subsidy, 244
 Port Novo Steel and Iron Company, 116
 Preferential treatment of British manufac-
 tures, 333.
 Programme system, 303
 Purchase of Guaranteed lines, 201

 Rahimtoola, Sir Ibrahim. Resolution on
 Industrial Commission, 363
 Railway—East Indian, 106
 " Budget, separation from the
 general, 305
 " Rates Policy, 309
 Raw Materials—Experiments in, 67
 Redgrave, Alexander, 197
 Regulation IX 1810, 321
 " X of 1810, 325
 Regulation, Madras of 1408, 322
 " of 1802, 323
 Regulation II of 1812, 329
 " IV of 1815, 333
 Repeal of the general import duty, 351
 Revenue Council of Bengal, 99-100
 Rice Mills, 166
 Rickards, Evidence of, 90
 Rivas, the Hon'ble Mr. 229

- | | |
|--|---|
| <p>Wagon building industry, 391
 Wallich, Evidence of, 65
 Walker, <i>re</i> introduction of tea in India, 45
 Watt, <i>Commercial Products</i>, 65, 154
 Washington Labour Conference, 236, 237, 249
 Webb, Sidney, 263
 Wellesley Lord, 20, Letter <i>re</i> silk industry</p> | <p>Westland—Sir James, on the nature of competition between Indian and British goods, 856
 Wilson on Indian finance, 340
 Woollen industry 11, 30, 145
 Workmen's Breach of Contract Act, 61
 Workmen's compensation Act, 1923, 247
 Worker's welfare League, 257</p> |
|--|---|

